

**An Examination of Motivation and Employee Promotion
Within the Big Six Accounting Firms**

A Thesis

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This thesis is dedicated to my parents for reasons too vast to list but mostly because of their endless support and love.

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Section I

A Changing Profession

“Five years ago if a client of another firm came to me and complained about the service, I’d immediately warn the other firm’s chief executive. Today I try to take away his client.”

-J. Michael Cook,
Chairman and CEO
of Deloitte & Touche, LLP¹

Several factors have played a significant role in changing the face of the accounting profession. Among the most powerful forces for change were the deletion of the rule banning competitive bidding, the lifting of the ban on advertising and solicitation, and the slowed growth in the number of firms demanding audits. The combination of government intervention and a stagnant level of demand have led to a highly competitive environment.

Government Intervention

During the 1970s, the American Institute of Certified Public Accountants (AICPA) began receiving pressure from the Justice Department and other governmental agencies to increase competition within the profession. In 1972, the federal government filed suit against the AICPA alleging its ban on competitive bidding was in violation of federal anti-trust laws. In 1975, the Supreme Court ruled that federal anti-trust laws

¹ H. Magill and G. Previts, CPA Professional Responsibilities: An Introduction (South-Western Publishing Co. 1987) 117.

applied to professional organizations. The ruling prompted the adoption of a revised rule. The code previously stated:

“A member shall not seek to obtain clients by solicitation. Advertising is a form of solicitation.”

But in 1978, the following rule was adopted.

“...a member shall not seek to obtain clients in a manner that is false, misleading or deceptive. A direct uninvited solicitation of a specific client is prohibited.”²

The Justice Department was not satisfied with the new advertising rule, and as a result in 1979, the ban on solicitation was lifted as well.

“A member shall not seek to obtain clients by advertising or other forms of solicitation in a manner that is false, misleading or deceptive.”³

The government’s intervention was motivated by a popular belief that competition is integral to the successful delivery of quality products at reasonable prices. It is believed that competition results in the streamlining of products and processes in order to minimize waste. In turn the consumer is generally presented with a quality product at a competitive price. At the same time, the producer attempts to maximize profit.

Accountants, conversely, contend that competition, namely price competition, often results in substandard service delivery because of the time constraints it imposes upon professional accountants, especially in the field of auditing. This relationship between competition and reduction in quality has never been proven. In fact, accounting firms cannot afford to reduce audit quality in today’s litigious environment. Short cuts or

² H. Lowe, (1987). Ethics in Our 100 Year History. Journal of Accountancy, 84.

³ Lowe 85.

other reductions in audit quality expose firms to lawsuit risk. Therefore, instead of reducing quality, firms strive to increase audit efficiency, while not jeopardizing audit quality. This enables firms to charge competitive fees while maintaining audit quality.⁴

Stagnant Demand

Adding to the competitive pressures of the accounting industry is the fact that the pool of entities requiring audits has not grown significantly over the last several years. Hence, when one auditor gains a new client, it usually means that another auditor has lost a client. The industry's new clients generally result from emerging businesses and some municipalities.⁵ In order to grow in this competitive environment, many of the Big Six firms are seeking business from small companies which they feel have the potential to become publicly held.⁶ (The Big Six firms include the world's six largest accounting firms: Price Waterhouse LLP, Deloitte & Touche LLP, KPMG Peat Marwick, Ernst Young, Coopers and Lybrand, and Arthur Andersen & Co. The Big Six was formerly known as the Big Eight, but mergers among the large firms decreased the Big Eight to the Big Six.)

Another result of the competitive environment has been an increase in merger activity among accounting firms. To meet more client needs and thereby retain current clients as well as attract new clients, firms have been forced to acquire areas of expertise other than audit. The need for new areas of expertise arose from the stagnant growth in the pool of new audit clients. Due to minimal new client growth, firms sought to generate

⁴ Magill and Previts 118.

⁵ J. Benedetti, "Marketer drums up business for Peat's sake," The Daily Reporter 26 June 1995: 1-2.

⁶ Magill and Previts 122.

new business with current clients. Firms have joined forces through mergers to acquire technical competence and management advisory services as well as other capabilities. Merger activity occurred not only between large firms but also between large and small firms. From 1987 to 1989, the Big Eight acquired over 40 accounting firms and about 40 consulting firms.⁷

For large accounting firms, a natural extension of their product line is to offer management advisory services (MAS). In 1983, four of the Big Eight were in the top ten largest US consulting firms, and Arthur Andersen and Co. was the largest consulting firm in the US. In addition to the significant fees that MAS generates (Andersen's MAS fees in 1988 totalled \$1.1 billion worldwide) the legal risks prevalent with auditing are not as common to the provision of MAS because no attest function is needed.⁸ An attestation engagement requires the auditor to provide "a written report on the reliability of a written assertion made by another party."⁹

As the competitive environment increases, an issue of concern to regulatory bodies is whether an audit firm's providing of non-audit, non-attest services erodes its independence with respect to audit clients. Accounting firms maintain that the provision of these additional services is necessary to meet clients needs. The firms also state that providing such services does not threaten their role as independent auditor. Rather, they argue it enhances performance because a broader understanding of the business is acquired from providing services such as consulting. The issue was of such great concern that in the 1970s, the Metcalf and Moss Congressional Subcommittee investigated this

⁷ Magill and Previts 123.

⁸ Magill and Previts 130.

⁹ K. Pany and O. Whittington, Auditing (Burr Ridge, Illinois: Irwin 1994): 654.

relationship. Following the Metcalf and Moss hearings, the SEC issued Accounting Series Release No. 250 (ASR 250) which required publicly held companies to reveal, as a percentage of total audit fees, the amounts of non-audit services purchased as well as descriptions of them.¹⁰ Importantly, the SEC did not prohibit the provision of non-audit services. This decision was supported by the subsequent findings of the Dingell Congressional Subcommittee as well as the findings of several other bodies including the Cohen Commission, the Public Oversight Board of the AICPA SEC Practice Section, and the Treadway Commission. Each of these bodies concluded that there was no evidence of compromised independence resulting from auditors providing additional services.¹¹

Two basic markets are served by the Big Six accounting firms. These firms generally serve large clients like the Fortune 500 companies as well as middle market clients. In serving these markets, the firms bring two general product groups to the market. The first product group is expertise in the areas of audit and tax, and the other is management advisory services (MAS). The firms have done an excellent job serving the needs of the large Fortune 500 companies, but a market that they have not fully tapped into is middle market firms. The Big Six have found that it is difficult to price MAS at a level that is profitable yet affordable to middle market clients.¹²

¹⁰ W. Read and S. Tomcyk, "An Examination of Changes in Scope of Services Performed by CPA Firms," Accounting Horizons 6 (1992): 42.

¹¹ Read and Tomcyk 42.

¹² T. Warrick, "Business Development," New Hire Orientation Deloitte & Touche LLP 23 July 1995.

Table 1

	Audit and Tax Services	MAS (Consulting)
Fortune 500	Excellent market penetration.	Excellent market penetration.
Middle Market	Good penetration but highly competitive.	Smaller firms dominate due to high costs of MAS.

(T. Warrick, "Business Development," New Hire Orientation Deloitte & Touche LLP 23 July 1995.)

As the Big Six look for opportunities to expand their business, middle market companies appear to be an attractive market. The problem, as stated earlier, is finding a way to fit the scope of services that the large accounting firms offer to the needs of the middle market companies. For example, a company with \$40 million in revenue generally cannot afford the typical MAS that costs \$1 million.

As competition between accounting firms continues to grow, firms will attempt to retain their current clients and attract new ones by providing many new services in addition to audit, tax, and MAS. To attract new clients with such services, the services must be marketed to potential clients. Firms have taken different approaches to the challenge of marketing. Most firms train current employees in services marketing and networking skills. In contrast, KPMG Peat Marwick recently hired a marketer to position the firm as "a full-service business adviser" in the minds of clients and potential

customers.¹³ Peat Marwick sees the consultancy business as integral to growth for the future, citing lack of growth in the audit market.

Hiring a marketer to tout a firm's services is a fairly unique approach to marketing within the accounting field. Peat Marwick stated that the reason for hiring a marketer is to position someone in the marketplace who can communicate to current clients, as well as potential clients, what the firm offers.

The fact that Peat Marwick hired a marketer is indicative of the time and budget pressures within the accounting industry. All of the large firms, including Peat Marwick, currently have people in the marketplace that can communicate the host of services offered. The firms' employees are currently in the marketplace and work closely with their clients. This relationship makes firms acutely aware of the clients' needs. Marketing of services is often difficult, though, because the presence of employees in the marketplace is generally in conjunction with the performance of audit services. Time and budget pressures, commonly associated with audits, may minimize the opportunity to perform marketing activities. Ultimately, increased competition may have increased audit efficiency without damaging audit quality, but inadvertent limits may have been placed on the ability of employees to perform marketing activities. This could have long term implications for the success of the large accounting firms.

¹³ Benedetti 1.

Section II

Time

A Shift in Power

The auditor's role is to act as an agent for shareholders.¹⁴ In this capacity, auditors report on the financial statements prepared by management. When large companies with many geographically dispersed shareholders are involved, it is impossible for auditors to report directly to all shareholders. As a result, the Board of Directors for most companies appoints an audit committee to represent shareholders in discussions with auditors. Although this arrangement appears to be an acceptable alternative to directly reporting to shareholders, members of management are often on the Board of Directors that selects the audit committee and many times are on the audit committee itself.¹⁵

As management personnel infiltrate audit committees, the relationship between auditors and shareholders changes. The real client is no longer the shareholder who seeks report from an independent auditor on the reliability of financial statements. Rather, today's client is management who seeks the fulfillment of a statutory requirement mandating that publicly held companies receive an audit. The change in client served shifts power from the shareholder and auditor to management. The decreased presence of the shareholders' watchful eye creates an environment where management can more

¹⁴ D. Cockburn, "Servant of Three Masters," CA Magazine 125 (1992): 37.

¹⁵ Cockburn 37.

easily serve its own needs. In this environment, management can more easily orchestrate an auditor change if it is dissatisfied with its auditor's decisions. Auditor changes, which were infrequent and controversial, are much more frequent. This places management in a powerful position because auditing firms are aware of management's ability to change auditors. Hence, auditing firms are pressured to price their services competitively.

As companies grow and operations and financial situations change, the competitive advantage of the current auditor may erode. When competitive advantage is lost, the company will seek out the least cost provider of the service because management increasingly seeks only to fulfill the statutory requirement for audits. The provider of the audit is not of great importance to management.

In an environment where the demand for such services is stagnant, firms cannot afford to lose current clients. In order to maintain current clients, firms have become much more cost conscious. The firms are seeking ways to control audit fees while maintaining audit quality. Firms use an audit time budget to estimate audit fees. In order to keep costs down, budgeted times used for fee estimation are often extremely optimistic. Hence, it can be very difficult for auditors to complete audit duties within those limited periods of time.

It is a difficult task for auditors to perform necessary activities within the budgeted time. The performance of audit duties must occur during the budgeted time. Additionally, due to the nature of services, which will be discussed in the pages that follow, marketing of services is most effective when performed during the provision of the service. Hence, the most opportune time for accounting firms to market the other

services they offer is during the audit. Because it is unethical to sell services that a client does not need, accountants must also analyze client needs to present the client with a variety of products that meet its unique needs. Hence, among the duties that accountants must accomplish within the budgeted time are performance of audit duties, marketing of services, and analysis of client needs.

Characteristics of Services

Services are comprised by several attributes differentiating them from goods. First, services are intangible; therefore, they cannot be touched. They are also perishable, meaning they cannot be inventoried. Services are also nonstandard. Each consumer has unique need that a service must be molded to fit. In contrast, goods tend to be standard and tangible.¹⁶ For example when a bread company makes a loaf of wheat bread, the loaf is not altered for consumers who have different needs. One consumer may wish to make sandwiches while another wants to make toast. Two different types of loaves are not produced. Rather, a single, standard product is produced and consumers must adapt the loaf to meet their diverse needs. In contrast, when an accounting firm audits two entities, for example the Bank One Corporation and the Ohio State University, the audits will be different because procedures necessary for auditing a large financial institution may not be relevant to the audit of a large university. Contributing to nonstandardization is client participation. Clients are heavily involved in the performance of an audit. Without their assistance, retrieval of necessary documents and policies would be virtually impossible.

¹⁶ W. George and K. Wheeler, "Practice Development - A Services Marketing Perspective," The CPA Journal (1986): 30.

Obviously, each client's level of involvement creates a unique atmosphere for the delivery of the service.¹⁷

Two factors which differentiate services from goods and have an important impact on the marketing of services are the simultaneous production and consumption of services and the fact that the producers of services are in contact with the public. Whereas the producers of bread work in a factory and are separated from the purchasers of bread, the producers of an audit are in direct contact with its purchasers. These two factors necessitate a different marketing approach than that undertaken for the marketing of goods. Purchasers of goods are influenced primarily by four things. Obviously, the good itself influences the purchaser. Also important are the price of the good and where the good can be purchased.¹⁸ When performed well, consumers are also influenced by the promotion of the good. Hence, three separate stages of the purchasing process have been identified. These include production of the good, promotion and pricing of the good, and finally purchase (consumption) of the good. These distinct stages are not present in the purchase process of a service. First, services are simultaneously produced and consumed. Secondly, marketing generally takes place during the simultaneous production-consumption process because of the personal contact between the service producers and service consumers.¹⁹

Instead of three separate functions, the purchase process for services is a single function. Because of the lack of sequence, a concept called interactive marketing was developed. Interactive marketing can be defined as "those marketing activities performed

¹⁷ George and Wheeler 30.

¹⁸ George and Wheeler 32.

¹⁹ George and Wheeler 35.

by all employees of the firm”.²⁰ As was explained in conjunction with goods, the marketing of goods was really a separate function from production and essentially could be a separate department. This is not the case for services. Rather, all producers of the service influence the buyer in some way because of the interactions between buyer and producer that are inherent with services. Recognition of the interactive marketing function is key to the long-term success of the service provider. While traditional marketing activities such as product promotion can be used to create broader awareness of the firm, interactive marketing must be performed to cultivate relationships with current clients which ensures longer term survival of a services firm.²¹ Interactive marketing is integral for maintaining client relationships, but it also places great pressure on accountants who are already operating within limited time budgets.

²⁰ George and Wheeler 32.

²¹ George and Wheeler 38.

Section III

Motivation

Motivation is defined as “those psychological processes that cause arousal, direction and persistence of voluntary actions that are goal directed.”²² In an environment where many companies have been forced to increase productivity to be competitive, motivation of employees has become an increasingly important issue. In a recent study, 29 percent of CEOs surveyed cited “motivation as the human resources issue they spend the most time on.”²³

Workplace motivation has puzzled researchers for decades. Consequently, many studies have been conducted. Leon Festinger’s Equity Theory of Motivation maintains that people will attempt to behave in a manner that is consistent with their cognitive beliefs.²⁴ Psychologist J. Stacy Adams related the equity theory to the workplace environment. Adams proposed that there are two integral components that result from exchanges between employers and employees. The two components of these exchanges are inputs and outcomes. Inputs include elements of the employee’s background and/or behavior such as education, training, experience, and effort. Outcomes result from inputs and include things like pay, fringe benefits, and praise.²⁵

²² R. Kreitner and A. Kinicki, Organizational Behavior (Chicago: Irwin, 1995): 142.

²³ E. Bogin, “From Staff to Dream Team,” Financial Executive (1995): 54.

²⁴ Kreitner and Kinicki 172.

²⁵ Kreitner and Kinicki 172.

In the workplace, equity exists for employees who feel that the amount of outcomes they receive for a given amount of inputs is the equivalent to that received by a coworker in a similar position of employment. Perceived levels of equity have been associated with increased job satisfaction and decreased job turnover.²⁶

The Job Characteristics Model resulted from additional research by J. Richard Hackman and Greg Oldham. The model attempts to determine how jobs can be structured so that they motivate employees. Job structures that motivate employees are said to prompt internal motivation. Internal motivation results from an individual being “turned on to one’s work because of positive internal feelings that are generated by doing well rather than being dependent on external factors (such as incentive pay or compliments from the boss) for the motivation to work effectively.”²⁷

The Job Characteristics Model proposes that three psychological states determine internal work motivation. The psychological states are experienced meaningfulness, experienced responsibility for outcomes, and knowledge of actual results of work activities. There are core job characteristics that elicit these psychological states. The core job characteristics associated with experienced meaningfulness are skill variety, task identity, and task significance. Autonomy is a core job characteristic associated with experienced responsibility for outcomes, and feedback leads to knowledge of actual results of work activities. When these psychological states are present outcomes result. Outcomes are high internal motivation, high growth satisfaction, high general satisfaction, and high work effectiveness.²⁸

²⁶ Kreitner and Kinicki 174-177.

²⁷ Kreitner and Kinicki 155.

²⁸ Kreitner and Kinicki 156.

Hackman and Oldham developed an index to predict the motivating potential score (MPS) of a job. Hence, by examining the core job characteristics present in a job, the model estimates the motivating potential of that job. The model²⁹ is as follows:

$$\text{MPS} = (\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}) / 3 * \text{Autonomy} * \text{Feedback}$$

Hackman and Oldham have determined that autonomy and feedback are the most important elements to determining the motivating potential of a job. By using the multiplication function, Hackman and Oldham propose that if either autonomy or feedback is nonexistent or zero, then the MPS is equal to zero.

In addition to core job characteristics, employees are motivated by training and development programs that are relevant to their occupations. In order for training and development to foster new or improved behaviors, the programs must be implemented and monitored on an ongoing basis. Without proper support, the use of techniques, behaviors, and knowledge gained from training tends to diminish as time passes. Support for training programs is necessary because workers face many obstacles when attempting to implement new tools.³⁰ For example, encounters with coworkers who prefer to do things as they have in the past rather than embrace new techniques make it difficult for other employees to utilize new tools. Also, it is sometimes difficult for employees to match newly gained knowledge with on-the-job needs.³¹

With proper support, training and development programs can be highly motivating. Programs aimed at the specific needs of employees empower them to solve

²⁹ Kreitner and Kinicki 158.

³⁰ J. Fecteau, G. Dobbins, J. Russell, R. Ladd, J. Kudisch, "The Influence of General Perceptions of the Training Environment on Pretraining Motivation and Perceived Training Transfer," Journal of Management 21 (1995): 2.

³¹ Fecteau et al 2.

problems. This increases autonomy and cultivates an experienced responsibility for outcomes which, in turn, generally increases job satisfaction.³²

³² Kreitner and Kinicki 156.

Section IV

The Peter Principle

“...the cream rises until it sours.”

-Lawrence Peter

The Peter Principle developed by Lawrence Peter and Raymond Hull states, “In a Hierarchy Every Employee Tends to Rise to His Level of Incompetence.”³³ Peter and Hull propose that the Peter Principle is the key to understanding hierarchical systems. Almost all individuals experience hierarchies in one form or another. They are prevalent in almost every system we encounter including the public and private sectors, government, and the armed forces.³⁴

The implication of the Peter Principle is that every individual will be promoted until he or she reaches a position where he or she can no longer competently fulfill the duties of his or her job. At this point, the individual is no longer promoted. This leads to the question, how is work accomplished if everyone is incompetent? The authors of the Peter Principle state that it is very rare to find an organization where every individual has reached his or her level of incompetence. Hence, productive work is performed by those who have not reached incompetence.

If Peter and Hull are correct, the presence of incompetence is inevitable. This can severely hamper the validity of performance evaluation because competence is measured

³³ L. Peter and R. Hull, The Peter Principle (New York: William Morrow & Co.): 25.

³⁴ Peter and Hull 26.

by others within the hierarchy. The degree of competence of performance evaluators, therefore, affects the quality of performance evaluations and feedback. Peter and Hull suggest that competent performance evaluators will base evaluations on output levels. In contrast, incompetent supervisors will evaluate based on inputs, or those behaviors that sustain the status quo. Such behaviors include things like respect for supervisors and neatness. Judging from the comments on one particular survey, the respondent had experienced such a situation. Questionnaire respondent #239 commented, "...evaluations are often emotionally driven. For example, if a staff is very smart or does a great job serving the client, the senior may feel threatened and jealous, therefore being more critical on an evaluation." In this type of situation, personal feelings tend to cloud professional judgment.

The comments of respondent #239 may also relate to the issue of super-competence. Peter and Hull have stated that super-competence, a level of competence that far exceeds others at similar employment levels, is more objectionable than incompetence. Super-competence tends to be more disliked than incompetence because it disrupts the hierarchy. Incompetence, on the other hand, does not. Rather, incompetent employees merely remain at their current employment level.³⁵

In order for the Peter Principle to remain in hierarchies, promotions must be based upon the mastery of skills needed at the current employment level rather than on the potential to master skills at the next employment level. Although the problem seems straightforward and easy to solve, Peter and Hull are confident that the existence of the Peter Principle will not be threatened. In typical hierarchies, leadership potential is seen

³⁵ Peter and Hull 45.

as insubordination by performance evaluators. Hence, a great deal of leadership potential is squelched or forced out of the hierarchy, and the status quo is maintained.

Section V

Questionnaire Formation

As this study was undertaken, five hypotheses were formed. The hypotheses centered on the issues of motivation, time budgets and promotional bases. From these five hypotheses, a questionnaire developed which has become the heart of this distinction project.

The questionnaire includes 38 questions, and question order was determined by drawing the questions out of a hat, with the exception of questions 31 through 38. Respondents were instructed to indicate their answer to each question or statement by circling the appropriate number. Most questions asked the respondent to indicate his or her level of agreement with the statement. The numerals one through five were provided for responses. The numeral one corresponded with the feeling of strong disagreement while five corresponded with strong agreement. An odd number of response choices was provided so that the respondent had the opportunity to indicate a neutral position. In this case, the response numbered three would indicate the lack of strong feelings about a statement. In some cases, respondents were simply asked to answer yes or no, or to circle the employee level they felt corresponded best with the statement provided. One section of the survey asked respondents to rate the importance of certain evaluation bases in the same manner they indicated their level of agreement to questions.

Prior to sending questionnaires to the test offices, the survey was sent to three human resources coordinators for comments and suggestions. Additionally, it was taken to the Statistics Consult Lab in room 516 Baker Systems to ensure that the construction of the questionnaire would allow it to be statistically analyzed.

The questionnaires were sent to the Columbus, Ohio, and Pittsburgh, Pennsylvania, offices of Deloitte & Touche LLP and Price Waterhouse LLP. These offices were chosen because they were accessible, and there was no reason to believe that they would not be representative of the population of Big Six firms. Questionnaires were delivered to each offices' human resources coordinator. The questionnaires were then placed in the mailboxes of each member of the respective audit staff. Each questionnaire was accompanied by a cover letter (exhibit 3) and a return address envelope.

Eighty surveys were delivered to both the Columbus office of Deloitte & Touche LLP and the Pittsburgh office of Price Waterhouse. Seventy-two questionnaires were delivered to the Deloitte and Touche office in Pittsburgh, and only 35 surveys were delivered to the Price Waterhouse office in Columbus. The number of surveys corresponds with the size of the audit staff at each respective office.

In all, 267 questionnaires were sent out on July 13, 1995. On August 7, 1995, the response deadline, 150 surveys had been returned indicating a response rate of 56.2 percent. In all 42 completed surveys were returned from the Columbus office of Deloitte & Touche LLP, 53 were returned from the Pittsburgh office of Price Waterhouse, 40 were returned from the Deloitte & Touche office in Pittsburgh, and 15 were returned from the Columbus office of Price Waterhouse.

On the pages that follow, exhibit 1 will display the survey, and exhibit 2 will display each hypothesis followed by the survey questions relating to each respective hypothesis. Finally, exhibit 3 will display the cover letter that accompanied each questionnaire.

Exhibit 1**Questionnaire**

This survey has been designed to sample your range of opinions on a number of topics. Some statements have more than one conclusion. Please complete the statement with each option and then circle the number which best matches the strength of your opinion for each option. Comments are welcome. Please feel free to share any thoughts or feelings either on the face of the survey or wherever most convenient.

	Strongly Disagree			Strongly Agree	
	1	2	3	4	5
1. Managers often have the opportunity to market services.					
2. Employees receive overtime compensation.		yes		no	
3. When performing unrecorded time, it is usually spent _____.					
-completing audit duties	1	2	3	4	5
-analyzing client needs	1	2	3	4	5
-marketing additional services	1	2	3	4	5
4. An important quality of a manager is _____.					
-leadership	1	2	3	4	5
-general business acumen	1	2	3	4	5
-technical expertise	1	2	3	4	5
-salesmanship	1	2	3	4	5
-ability to complete audits within the budgeted time	1	2	3	4	5
5. Time budgets are too tight.	1	2	3	4	5
6. Excellent performance is recognized.	1	2	3	4	5
7. Managers tend to be excellent marketers of services.	1	2	3	4	5
8. An important quality of a partner is _____.					
-leadership	1	2	3	4	5
-general business acumen	1	2	3	4	5
-technical expertise	1	2	3	4	5
-salesmanship	1	2	3	4	5
-ability to complete audits within the budgeted time	1	2	3	4	5
9. Promotion of seniors is primarily the result of technical competence and efficient work habits.	1	2	3	4	5
10. Exceeding the time budget has negative ramifications.	1	2	3	4	5
11. An important quality of a staff level employee is _____.					
-leadership	1	2	3	4	5
-general business acumen	1	2	3	4	5
-technical expertise	1	2	3	4	5
-salesmanship	1	2	3	4	5
-ability to complete audits within the budgeted time	1	2	3	4	5
12. Performance reviews are completed on a timely basis.	1	2	3	4	5
13. Staff level employees are trained in techniques used to identify marketing opportunities.	1	2	3	4	5
14. Excellent performance is appreciated rather than merely expected.	1	2	3	4	5
15. I would work an extra hour to analyze client needs.	1	2	3	4	5
16. Marketing education is first introduced at what employee level	manager	partner	staff	senior	
17. Primary marketers of services are:	manager	partner	staff	senior	
18. I have been in a situation where someone else received credit for my audit finding or recommendation.					
	1	2	3	4	5
	Strongly Disagree			Strongly Agree	

Exhibit 2

Hypotheses

Hypothesis 1: Employees who receive overtime compensation will be more willing to work an extra hour to analyze client needs.

2. Employees receive overtime compensation.
15. I would work an extra hour to analyze client needs.

Hypothesis 2: Promotions of staff and seniors are based on the mastery of skills needed at the current level and not on the potential to perform competently at the next employment level.

1. Managers often have the opportunity to market services.
7. Managers tend to be excellent marketers of services.
9. Promotion of seniors is primarily the result of technical competence and efficient work habits.
8. An important quality of a partner is _____.
 - leadership
 - general business acumen
 - technical expertise
 - salesmanship
 - ability to complete audits within the budgeted time
4. An important quality of a manager is _____.
 - leadership
 - general business acumen
 - technical expertise
 - salesmanship
 - ability to complete audits within the budgeted time
11. An important quality of a staff level employee is _____.
 - leadership
 - general business acumen
 - technical expertise
 - salesmanship
 - ability to complete audits within the budgeted time
23. An important quality of a senior is _____.
 - leadership
 - general business acumen
 - technical expertise
 - salesmanship
 - ability to complete audits within the budgeted time

31. An important basis of evaluation for staff level employees is _____.
 - leadership skills
 - marketing skills
 - ability to identify potential problems and opportunities
 - ability to perform audit duties within the budgeted time
32. An important basis of evaluation for managers is _____.
 - leadership skills
 - marketing skills
 - ability to identify potential problems and opportunities
 - ability to perform audit duties within the budgeted time
33. An important basis of evaluation for seniors is _____.
 - leadership skills
 - marketing skills
 - ability to identify potential problems and opportunities
 - ability to perform audit duties within the budgeted time
16. Marketing education is first introduced at what employee level

Hypothesis 3: Managers are promoted to partner level based on their potential to perform competently at the partner level.

1. Managers often have the opportunity to market services.
7. Managers tend to be excellent marketers of services.
17. Primary marketers of services are:
24. Partners are more technically oriented than marketing oriented.
32. An important basis of evaluation for managers is _____.
 - leadership skills
 - marketing skills
 - ability to identify potential problems and opportunities
 - ability to perform audit duties within the budgeted time
8. An important quality of a partner is _____.
 - leadership
 - general business acumen
 - technical expertise
 - salesmanship
 - ability to complete audits within the budgeted time
16. Marketing education is first introduced at what employee level.

Hypothesis 4: Staff are not motivated to perform marketing activity although they are expected to.

6. Excellent performance is recognized.
10. Exceeding the time budget has negative ramifications.
11. An important quality of a staff level employee is _____.
 - leadership
 - general business acumen
 - technical expertise
 - salesmanship
 - ability to complete audits within the budgeted time
14. Excellent performance is appreciated rather than merely expected.
18. I have been in a situation where someone else received credit for my audit finding or recommendation.
19. Staff are expected to identify opportunities to market additional services.
22. The in-charge is more likely to be pleased that you identified a potential problem of significance than disgruntled by the extra work it may cause.
25. I receive credit for successful marketing attempts.
30. Credit is received for all marketing efforts regardless of the client's purchase decision.
12. Performance reviews are completed on a timely basis.
28. The results of performance reviews are instructive as to how to improve performance when needed.
13. Staff level employees are trained in techniques used to identify marketing opportunities.
26. A specific cost center exists for billing time spent marketing services.
27. A specific cost center exists for billing time spent analyzing client needs.
21. Marketing education is an integral part of auditor training.

Hypothesis 5: Time budgets are too restrictive to allow for the performance of audit duties, analysis of client needs, and marketing of services.

3. When performing unrecorded time, it is usually spent _____.
 - completing audit duties
 - analyzing client needs
 - marketing additional services
5. Time budgets are too tight.

21. I contribute significant amounts of unrecorded time:
29. Performance of audit duties takes priority over marketing activities when time budgets are tight.

Exhibit 3

30 E. Frambes Apt. B2
Columbus, OH 43201
June 25, 1996

Dear Sir or Madam:

I am an accounting student at The Ohio State University and am currently completing a thesis for graduation with distinction at the undergraduate level. I am working under the supervision of my faculty advisor, Professor Richard Murdock.

I have developed the attached opinion survey to analyze several aspects of the public accounting work environment. I would greatly appreciate it if you would share your opinions which have been fostered by your experience in the public accounting field. I invite and encourage you to share any comments pertaining to your career in public accounting or to the survey.

Please complete the survey at your earliest convenience and return it to me in the postage paid envelope provided. All answers are anonymous and confidential and will be used only for statistical purposes in a paper to be completed in August 1995. If you would be willing to discuss any of the survey issues in detail, please contact me at the above address. Your time and attention are greatly appreciated.

Sincerely

Heather Shugars

Section VI

Statistical Testing

Hypothesis One: Employees who receive overtime compensation will be more willing to work an extra hour to analyze client needs.

Hypothesis one was based on the equity theory of motivation as it relates to the workplace. Using the equity theory, the input in this scenario is effort or working extra hours, and the outcome is pay. Hypothesis one states that those employees who receive overtime compensation will perceive the level of outcomes received as more equivalent with their level of input than those employees who do not receive overtime compensation. That is, employees who receive overtime compensation will be more willing to work an extra hour to analyze client needs.

Two questions were included in the survey to address this hypothesis. Question two asked if employees received overtime compensation. Question 15 asked respondents to state how strongly they agreed or disagreed with the statement: "I would work an extra hour to analyze client needs."

In order to test the hypothesis, a t-test was performed on questions two and fifteen. The t-tests is a robust procedure when sample sizes are similar. The sample size for "yes" responses to question two was 73, and the sample size for "no" responses was 75. In order to achieve equal sample sizes, two "no" responses would have to be discarded randomly.

When an interval scale is used for survey questionnaires, the difference between responses three and four is the same as the difference between responses four and five. Questions often arise when determining whether or not attitude measures are interval scales. Most attitude measurements are not true interval scales because the intervals between categories are not equal, “but they may not be so unequal as to preclude treating the whole as an interval scale.”³⁶ Hence, the scale used in this research may be considered close enough to an interval scale to use with a t-test. Tests for nominally scaled and ordinally scaled data may also be used on this data because they meet the requirements for these tests as well.

The null hypothesis of the t-test is that there is no difference between the two groups, those that receive overtime compensation and those that do not. The alternative hypothesis is that there is a difference between the two groups indicated by their response to the question on willingness to work an extra hour to analyze client needs.³⁷ The results were as follows: Seventy-three respondents stated that they do receive overtime compensation and 75 respondents stated that they do not. The mean answer given to question 15 by those receiving overtime compensation was 4.027. The mean response given by those who do not receive overtime compensation is 3.720. (See Appendix B, Figure 1.) The larger response indicates greater willingness to work an additional hour. Responses were formatted so that the larger the value, the greater the level of agreement indicated.

³⁶ D. Aaker and G. Day, Marketing Research (New York: John Wiley & Sons): 274.

³⁷ Aaker and Day 458.

To determine whether the differing responses are significant, the t-test determines a p-value which indicates the probability of such a finding occurring by chance or due to sampling error.³⁸ (See Appendix B, Figure 2.) The p-value for this test is 0.0322. Hence, the chance that the two groups are actually the same despite the differing means is only 3.2 percent. P-values of 0.10 or less are generally considered impressive.

The findings are significant enough to reject the null hypothesis which states that the two groups are the same and to accept the alternate hypothesis. Therefore, it may be said that those who receive overtime compensation are more likely to be willing to work an extra hour to analyze client needs than those who do not receive overtime compensation.

Hypothesis Two: Promotions of staff and seniors are based on the mastery of skills needed at the current level and not on the potential to perform competently at the next employment level.

Hypothesis Three: Managers are promoted to partner level based on their potential to perform competently at the partner level.

Hypothesis two relates to the Peter Principle which states that employees are promoted until they reach their level of incompetence.³⁹ This results because employees are promoted based on how competently they perform in their current position and not on their potential to perform competently at the next level.

Hypothesis two was based upon knowledge of the organization of the Big Six firms and Peter and Hull's assumption that the Peter Principle exists in all hierarchies.

³⁸ Aaker and Day 458.

³⁹ Peter and Hull 27.

Promotion from staff and senior level positions is primarily based on duration of employment. Generally, staff are promoted to senior after two to three years with a Big Six firm. Several comments received in conjunction with question nine alluded to this fact. For example, comments such as “almost automatic” and “Fairly routine...it is more often the result of completing the time 2-3 years as staff and passing the CPA exam” were received.

Although it was hypothesized that the promotions of staff and seniors were based upon competent performance at current employee levels rather than potential to perform competently at the next level, hypothesis three states that promotions of managers to partner are based upon the ability to perform competently at the partner level. This assumption or hypothesis is partly based on what is commonly called the up or out structure of the Big Six firms.

The up or out structure refers to the fact that employees either continue to be promoted or leave the firm. Whereas employees of a bank, for example, may spend an entire career at a certain employee level such as loan officer, this does not occur with the Big Six. That is, people do not spend their entire career being a senior or manager at a Big Six accounting firm. Because of the up or out structure, it is hypothesized that those who possess the potential to perform competently at the partner level will be promoted, and those who do not will be dismissed or leave the firm on their own.

Two major responsibilities of partners are to market the firm and to provide technical expertise. Managers have the opportunity to perform both of these activities as

well as others important at the partner level. Hence, it is possible to assess the potential of individuals to perform well at the partner level.

In order to test hypotheses two and three, several questions were included in the questionnaire that addressed the issues. Two questions, in particular, were examined simultaneously. Question 34 and question 36 were tested using the chi-square technique. (See Appendix B, Figure 3.) Question 34 asks respondents what employee level they are, and question 36 asks respondents whether they have received at least one day of training devoted to services marketing. Based upon the hypotheses, it would be expected that managers would respond positively to the services marketing question, and staff and seniors would not. This assumption is due to the fact that since staff and seniors are not promoted based upon possession of skills needed at the next level, they have not received marketing training. Conversely, since it is assumed managers are promoted based upon ability to perform at the partner level and do, in fact, perform much the same activity, they would receive training in services marketing.

A chi-square test was performed on questions 34 and 36. A chi-square test is appropriate for independent samples of nominally scaled data. The data in this study is at least nominally scaled, as discussed previously. The null hypothesis for the chi-square statistic is that the two variables, questions 34 and 36, are statistically independent. Based upon the null hypothesis, an expected value is determined for each cell of the chi-square. The alternate hypothesis states that the two variables are not statistically independent.⁴⁰

⁴⁰ Aaker and Day 464.

The employee levels are indicated by the numerals one through four on the left side of the chi-square and the response to the services marketing question, 1 = yes and 2 = no, is shown across the top of the chi-square. Coding of employees levels is as follows: 1 = manager, 2 = partner, 3 = staff, and 4 = senior. Using the partner level as an example, the observed values, ten and zero appear on line one, and the expected values, 6.96 and 3.04, appear on line two. The observed values indicate that all ten partners responding had received training in services marketing while only about seven (6.96) partners were expected to have received services marketing training.

A chi-square statistic is calculated as well as a p-value. The null hypothesis is either rejected or accepted based upon the p-value. Referring to the chi-square, differences among the expected and observed values for the different employee levels are noted. The chi-square statistic for questions 34 and 36 is 43.482. The corresponding p-value is less than 0.001, making it significant at the 0.1 percent level. Hence, the null hypothesis is rejected and the alternative hypothesis is accepted. That is, there is a difference among the employee levels. The observed values indicate that services marketing training was not as common among the staff and senior levels as it was at the manager and partner levels. (See Appendix B, Figure 4.)

Hypothesis Four: Staff are not motivated to perform marketing activity although they are expected to do so.

Hypothesis four centers on two questions. The first question asks whether or not staff are expected to market services and is included in the questionnaire as question 19. The second part of this hypothesis relates to whether or not staff level employees are

motivated to perform such services. Several survey questions related to the issue of motivation.

Chi-square tests were performed on questions 34 and 19 (see Appendix B, Figure 5) as well as questions 34 and 10 (see Appendix B, Figure 6). Question 34 asked respondents what employee level they were, and question 19 asked whether staff level employees are expected to market services. Question 10 asked respondents whether exceeding the time budget had negative ramifications. The chi-square test performed on questions 19 and 34 seems to reveal that the questions are statistically independent. This means that the answer to question 19 was not influenced by the employee level of the respondent.

The results of the chi-square test performed on questions 34 and 19 were extremely interesting. (See Appendix B, Figure 7.) If the “3” responses to question 19 are disregarded since they indicate lack of a strong opinion on the issue, it is revealed that more managers felt that staff were not expected to market services while more partners responded positively to question 19. Staff level employees also tended to respond positively more often than negatively. Seniors were the only employee group in which the response was overwhelmingly skewed toward agree or disagree. Again, disregarding the responses coded as “3”, 18 seniors answered the question positively while only eight seniors felt that staff were not expected to identify opportunities to market services.

The chi-square statistic for the test involving questions 19 and 34 was 17.787. The probability of this result occurring by chance or due to sampling error is about 12 percent. A p-value of 0.12 indicates that findings are not strong enough to reject the null

hypothesis. Interestingly, though, the mean response to question 19 by Price Waterhouse employees was 3.324. The response by Deloitte and Touche employees was 2.938. (see Appendix B, Figure 8.)

To determine whether staff level employees are motivated to perform marketing activities, a chi-square test was performed on questions 34 and 10. Question 10 was used because, as was discussed in the section on time, budgets may not allow for the performance of audit duties, analysis of client needs, and the opportunity to market services. Another question (question 29) used in the survey asks respondents if audit duties take priority over marketing activity. The mean response to this question was 4.385 indicating that respondents agreed that audit duties take priority over marketing activities when time budgets are tight. Although the mean is not a statistical operation, it still gives an idea as to how respondents feel regarding this issue.

Knowledge of the response to question 29 aids in the analysis of the chi-square performed on questions 34 and 10. The chi-square statistic was 19.774 indicating a probability of the results being due to sampling error of only about 7.5 percent. Hence, the null hypothesis was rejected, and it was concluded that questions 34 and 10 were not statistically independent. That is, the level of employment affected the response to question 10. The chi-square table illustrates that the opinions of management (managers and partners) were basically in a normal distribution. (See Appendix B, Figure 11.) In contrast, the opinions of staff and seniors were weighted heavily towards agreement to the statement that exceeding time budgets has negative ramifications. (See Appendix B, Figure 12.) This knowledge coupled with the indication, by responses to question 29, that

audit duties take priority over marketing activities, may lead to the assumption that when time is tight marketing activity will be neglected so as to not exceed budgeted times.

The results of the chi-square on questions 34 and 10 in conjunction with the mean response to question 29 lead to the conclusion that staff level employees are not being motivated to perform marketing activities although they seem to be expected to do so.

Hypothesis Five: Time budgets are too restrictive to allow for the performance of audit duties, analysis of client needs, and marketing of services.

In order to test hypothesis five, several questions were included in the survey about time budgets and unrecorded time. First, respondents were asked, in question five, if time budgets were too tight. Respondents were also asked, in question 20, how often significant amounts of unrecorded time were contributed. Finally, respondents were asked whether unrecorded time was spent analyzing client needs, completing audit duties or performing marketing activities.

Respondents interpreted the term “unrecorded time” to mean something different than the questions intended. The goal of the question was to ascertain how often employees eat time or perform duties that are not billed. Unfortunately, respondents had a difficult time interpreting what was meant by the term “unrecorded time”. Problems with interpretation were indicated by comments such as “what do you mean...”, “all time is expected to be recorded”, and “all of these tasks are expected to be reported on employees’ time report, its just an issue of whether the time is allocated to the client or office overhead”, as well as many other comments. Additionally, many respondents did not answer the questions that included the term “unrecorded time”. Due to these facts,

the data have been deemed insufficient to adequately address the issues of hypothesis five.

Section VII

Conclusion

The purpose of this study was to evaluate motivation levels and employee promotional bases within the Big Six, as a whole. Many survey questions relating to these topics centered around the issues of marketing and time budgets, making this study unique. Also, the use of two accounting firms, Deloitte & Touche LLP and Price Waterhouse, allowed for the comparison between employees who receive overtime compensation and those who do not because Deloitte & Touche LLP pays its staff level employees for overtime while Price Waterhouse does not. Two cities were surveyed in order to achieve a larger sample size.

In addition to the statistical tests that were explained previously, the mean response of each question has also been computed. While the means provide no guarantee of reliable projection to the Big Six population because they are not statistical tests, they do provide some insight to the feelings and attitudes of survey respondents. These feelings and attitudes can, when combined with statistical results, lead to greater understanding of underlying situations within the firms.

Hypothesis two stated that promotions of staff and senior level employees are based upon the mastery of skills needed at the current level, as opposed to the potential to perform competently at the next employee level. The chi-square test for this hypothesis was significant at the 0.1 percent level. Further analysis, also tends to support the validity

of hypothesis two. For example, when question four, which asks respondents to rate the important qualities of seniors, is compared with question 31 which identifies important evaluation bases for staff level employees, the findings support the hypothesis.

Respondents rated leadership as the most important quality of seniors, but leadership was considered the third most important bases of evaluation of staff level employees out of the four options listed. Thus, these findings indicate that an environment exists where it is likely that employees may be promoted to their level of incompetence.

In an environment where the evaluation of employees does not take into serious consideration skills needed at the next employment level, the possibility that ill-prepared, ill-equipped employees will be promoted is much greater than that which exists in an environment where employees' performance is evaluated based upon potential to excel.

In contrast, when the importance of evaluation bases of managers (question 32) is compared with the important qualities of partners (question 8), the data reveal that the evaluation bases of managers are consistent with the rankings of partner characteristics. Hence, hypothesis three which states that managers are promoted based on their ability to perform well at the partner level, was supported by these results.

The results of questions relating to hypothesis four, which stated that staff level employees are expected to perform marketing although not motivated to do so, were very interesting. Although the chi-square test was significant only at the 12 percent level, further analysis of questions relating to hypothesis four supported it. The mean responses to question 10, which asks respondents whether exceeding the time budget has negative ramifications, were broken down by employee group. The mean response for staff level

employees was 3.479. Additionally, seniors had a mean response of 3.25. Each of these scores was much higher than management level employees. Managers responded with an average score of 3.01 while partners had a mean response of 3.00.

The differing responses across employee levels may have several human resources implications for Big Six firms. First, the fact that non-managerial employees agreed much more strongly with the idea of negative ramifications being associated with exceeding time budgets implies that the non-managerial employees are less motivated to perform marketing activity than the managerial ranks think they are. While management may feel that staff is being motivated, only staff can truly determine whether they feel motivated to perform marketing activities. Therefore, communication between managerial and non-managerial employees is very important in assessing employee attitudes and job satisfaction.

Motivation of employees may be accomplished in many ways, especially with natural rewards.⁴¹ Natural rewards include things like feedback and compliments. Responses indicate that the firms are failing to communicate natural rewards. Questions six and 10 ask respondents whether excellent performance is recognized and appreciated, respectively. The mean responses to these questions were 3.38 and 3.23. These responses do not indicate strong feelings of agreement. Natural rewards do not cost anything to implement, and evidence shows that they are highly motivating because people generally do not grow tired of compliments.⁴²

⁴¹ Kreitner and Kinicki 216.

⁴² Kreitner and Kinicki 216.

In addition, the mean response to question 12, which asked if performance reviews were completed on a timely basis, was 2.79. The MPS equation, presented in Section 3, created by Hackman and Oldham states that lack of feedback leads to an MPS = 0. Feedback is not only important for motivating employees, it can also instruct employees how to perform more productively. Feedback is considered most effective when given on a timely basis and accompanied by instructive hints as to how to improve performance.⁴³ The mean response to question 28, which asked if performance reviews were instructive as to improved performance, was only 3.50. Performance evaluations which Big Six firms generally distribute after the completion of each audit assignment, are a motivating tool that Big Six management is not utilizing to its full potential.

While the purpose of this study was to assess motivation levels and employee promotional bases within the Big Six as a whole, many extensions of this study are possible. Hypothesis testing could be performed to differences between firms, between cities, or even both. Many extensions of this study are possible because the data collection method included coding each survey to reveal the city and firm it came from.

Comparisons of the two firms could be interesting because these firms have very different histories. Price Waterhouse has never undergone a merger. Conversely, Deloitte & Touche LLP is the product of a merger. The merger between Deloitte Haskins & Sells and Touche Ross created the firm that exists today.

Additionally, a comparison between the two cities could be very interesting. The client base of each city is very different. Pittsburgh firms tend to have a client base that is much more manufacturing oriented than Columbus firms. Also, the geographical area

⁴³ Kreitner and Kinicki 158.

covered by Pittsburgh firms tends to be much larger than that of the Columbus firms.

Columbus shares Ohio based clients with offices in Cleveland and Cincinnati.

Pittsburgh offices serve clients in eastern Ohio, western Pennsylvania, and West Virginia.

Due to this fact, differences may exist between Columbus employees and Pittsburgh employees since Pittsburgh employees may be forced to travel greater distances to clients.

Appendix A

Variable	N	Mean	Std Dev	Minimum	Maximum
ID	150	174.5000000	43.4453680	100.0000000	249.0000000
LOC	150	2.1866667	0.9580928	1.0000000	4.0000000
CO	150	1.4533333	0.4994852	1.0000000	2.0000000
ARR	150	1.1400000	0.3481495	1.0000000	2.0000000
Q34	149	2.5436242	1.2051871	1.0000000	4.0000000
Q35	146	5.0205479	4.8925971	1.0000000	25.0000000
Q36	148	1.3040541	0.4615676	1.0000000	2.0000000
Q37	149	1.0000000	0	1.0000000	1.0000000
Q38	146	1.3630137	0.4825241	1.0000000	2.0000000
Q1	142	3.8873239	0.9596436	1.0000000	5.0000000
Q2	149	1.5033557	0.5016750	1.0000000	2.0000000
Q3A	128	2.7578125	1.3903271	1.0000000	5.0000000
Q3B	128	2.6484375	1.0910505	1.0000000	5.0000000
Q3C	127	2.5118110	1.2840050	1.0000000	5.0000000
Q4A	149	4.5704698	0.6179197	1.0000000	5.0000000
Q4B	148	4.2770270	0.6369672	3.0000000	5.0000000
Q4C	148	4.2500000	0.7365575	2.0000000	5.0000000
Q4D	148	3.7297297	0.7789282	2.0000000	5.0000000
Q4E	147	3.5510204	0.8694485	1.0000000	5.0000000
Q5	148	3.6216216	0.9433289	1.0000000	5.0000000
Q6	149	3.3825503	0.8186782	1.0000000	5.0000000
Q7	146	2.7945205	0.6839823	1.0000000	4.0000000
Q8A	148	4.7364865	0.5515777	2.0000000	5.0000000
Q8B	148	4.6689189	0.5519109	3.0000000	5.0000000
Q8C	149	4.2416107	0.8108305	2.0000000	5.0000000
Q8D	147	4.6938776	0.5049379	3.0000000	5.0000000
Q8E	147	2.9251701	1.0006055	1.0000000	5.0000000
Q9	148	3.5000000	0.9931740	1.0000000	5.0000000
Q10	146	3.2397260	0.8890506	1.0000000	5.0000000
Q11A	148	3.3175676	0.9187181	1.0000000	5.0000000
Q11B	148	3.5202703	0.7601432	2.0000000	5.0000000
Q11C	149	3.8322148	0.7918733	2.0000000	5.0000000
Q11D	147	2.3197279	0.8835358	1.0000000	5.0000000
Q11E	145	4.0896552	0.8409423	2.0000000	5.0000000
Q12	148	2.7905405	1.0118574	1.0000000	5.0000000
Q13	149	2.5369128	0.9762275	1.0000000	5.0000000
Q14	148	3.0202703	0.9437917	1.0000000	5.0000000
Q15	149	3.8724832	0.8721563	1.0000000	5.0000000
Q16	147	2.9591837	1.0719177	1.0000000	4.0000000
Q17	115	1.7739130	0.4786837	1.0000000	4.0000000
Q18	146	2.9520548	1.2053455	1.0000000	5.0000000
Q19	148	3.1148649	0.9441812	1.0000000	5.0000000
Q20	141	2.5602837	0.9810257	1.0000000	4.0000000
Q21	148	2.7635135	0.8910858	1.0000000	5.0000000
Q22	149	3.8724832	1.0019480	1.0000000	5.0000000
Q23A	148	4.4121622	0.6486937	1.0000000	5.0000000
Q23B	147	4.0136054	0.5850465	3.0000000	5.0000000
Q23C	147	4.3197279	0.5850465	3.0000000	5.0000000
Q23D	147	3.0884354	0.6715875	1.0000000	5.0000000
Q23E	147	4.1292517	0.7519118	2.0000000	5.0000000
Q24	147	2.8639456	0.9906374	1.0000000	5.0000000
Q25	142	3.4225352	0.8532287	1.0000000	5.0000000
Q26	144	3.6875000	1.1794793	1.0000000	5.0000000
Q27	147	2.5714286	1.2163273	1.0000000	5.0000000

The SAS System

13:03 Thursday, August 17, 1995

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Variable	N	Mean	Std Dev	Minimum	Maximum
Q28	149	3.5033557	0.7409286	1.0000000	5.0000000
Q29	148	4.3851351	0.7606267	2.0000000	5.0000000
Q30	141	2.8794326	0.9890484	1.0000000	5.0000000
Q31A	149	3.2617450	0.9182531	1.0000000	5.0000000
Q31B	149	2.2684564	0.8513175	1.0000000	5.0000000
Q31C	149	4.0805369	0.6927889	2.0000000	5.0000000
Q31D	149	4.1476510	0.6614464	2.0000000	5.0000000
Q32A	146	4.4726027	0.6345806	1.0000000	5.0000000
Q32B	146	4.1027397	0.6184458	3.0000000	5.0000000
Q32C	146	4.4246575	0.5852864	3.0000000	5.0000000
Q32D	146	3.6506849	0.8517120	1.0000000	5.0000000
Q33A	148	4.3648649	0.6715668	1.0000000	5.0000000
Q33B	148	3.2432432	0.7964344	1.0000000	5.0000000
Q33C	148	4.4932432	0.5532418	3.0000000	5.0000000
Q33D	148	4.2297297	0.7104142	2.0000000	5.0000000

Table 2
Responses to Questionnaire

ID#	LOC	CO	ARR	Q34	Q35	Q36	Q37	Q38	Q01	Q02	Q3A	Q3B	Q3C	Q4A	Q4B	Q4C	Q4D	Q4E	Q05	Q06	Q07	Q08A	Q08B	Q08C	Q08D	Q08E	Q09	Q10	11A	11B	11C	11D	11E	Q12
100	1	1	1	1	7	1	1	1	4	1	1	3	4	5	4	5	4	3	3	3	3	5	5	4	5	2	4	3	5	3	3	2	3	3
101	1	1	1	1	9	1	1	2	3	1				5	4	4	4	4	3	3	3	5	4	4	4	4	4	3	4	3	3	3	3	
102	2	2	1	1	5	1	1	2	3	2	4	3	2	4	4	4	3	3	4	3	3	4	4	4	4	3	2	2	4	4	4	2	3	2
103	2	2	1	4	3	1	1	1	3	2	5	2	4	5	5	3	4	4	5	3	3	5	5	3	5	3	2	3	3	3	4	3	5	2
104	2	2	1	1	9	1	1	1	3	2	4	3	2	4	4	4	4	3	4	3	3	4	4	4	4	3	4	3	4	4	4	4	3	3
105	2	2	1	1	5	1	1	1	4	2	4	4	4	5	4	5	4	5	3	4	3	5	5	5	5	5	3	5	3	3	4	3	5	1
106	2	2	1	1	6	1	1	2	5	2	2	4	4	5	5	4	5	3	3	5	4	5	5	4	4	2	4	3	4	4	4	3	5	4
107	3	1	1	3	1	2	1	1	4	1	5	3	2	5	4	5	3	3	4	2	2	5	5	3	5	3	4	3	2	4	4	2	4	4
108	2	2	1	3	1	2	1	1	3	2	4	1	1	5	4	3	4	3	3	4		5	5	5	5	3	1	3	3	3	3	5	1	
109	3	1	1	1	7	1	1	1	4	2				1	5	5	4	5	3	3	4	5	5	4	5		2	3	1	4	3	2	5	5
110	3	1	1	1	2	1	1	1	4	2	5	3	2	4	5	5	2	3	4	3	3	4	5	5	4	3	5	3	2	4	4	1	4	2
111	3	1	1	4	3	1	1	2	5	1	5	1	1	5	4	2	4	3	3	4	3	5	5	5	5	3	4	2	5	4	2	3	5	2
112	3	1	1	4	3	2	1	1	4	1	4	2	2	4	4	4	3	4	4	4	3	5	5	5	5	5	4	3	4	4	4	2	4	3
113	3	1	1	1	6	1	1	1	1	2	1	2	4	5	5	5	3	3	3	4	2	5	5	3	3	4	2	5	5	5	3	3	1	
114	3	1	1	3	2	2	1	1	4	1	3	3	4	4	4	3	4	4	2	3	3	5	4	4	5	3	3	3	4	3	2	2		4
115	3	1	1	1	9	1	1	1	4	2	3	2	4	5	5	5	3	4	3	3	2	5	5	5	5	3	5	2	3	4	5	2	4	3
116	3	1	1	4	3	2	1	2	3	1	1	3	2	5	4	4	3	3	5	1	3	5	4	5	4	3	1	4	4	3	3	3	4	1
117	3	1	1	4	5	1	1	1	5	2	1	1	1	5	5	2	4	2	3	1	1	5	5	3	4	3	1	4	5	5	4	4	5	1
118	3	1	1	3	1	1	1	2	3	1	5	3	2	5	4	5	4	4	4	4	3	5	4	5	5	4	4	4	4	4	4	5	4	4
119	3	1	1	4	1	1	1	1	4	1	3	1	1	5	4	4	4	4	5	3	3	5	4	4	5	2	3	4	3	4	3	3	4	
120	3	1	1	1	7	1	1	1	4	2	5	1	1	5	5	4	3	3	1	4	3	5	5	4	5	3	4	3	4	4	5	2	3	4
121	3	1	1	3	1	2	1	2	1	5	2			5	3	4	4	4	5	3	3	2	3	5	4	1	3	5	2	2	3	2	5	4
122	3	1	1	1	10	1	1		3	1				5	5	5	5	5	2	3	2	5	5	5	5	5	2	3	4	3	4	2	4	4
123	3	1	1	1	6	1	1	2	4	1	2	4	3	5	5	5	4	4	3	2	2	5	5	5	5	4	4	3	5	3	3	3	5	2
124	3	1	1	4	3	2	1	1	3	1	1	2	2	5	5	5	5	5	3	3	3	5	5	5	5	5	3	3	4	4	3	3	4	3
125	3	1	1	4	2	1	1	1	5	1	4	3	1	5	4	5	4	4	5	3	3	5	5	5	5	3	4	4	3	4	4	3	5	2
126	3	1	1	4	4				5	1	2	5	5	5	5	5	5	5	5	3	3	5	5	5	5	5	4	3	5	5	5	5	5	1
127	3	1	1	4		2	1		2	1	4	4	1	5	5	5	5	5	1	3	1	5	5	5	5	5	3	3	5	5	5	5	5	3
128	3	1	1	3	2	2	1	2	4	1	4	2	2	5	5	5	3	4	4	3	3	5	5	5	5	5	4	4	6	5	5	3	5	1
129	1	1	1	2		1	1	1	5	2	1	2	4	4	5	3	4	4	2	4	3	5	5	3	4	4	4	5	4	3	4	3	5	4
130	1	1	1	3	1	2	1	2	3	2				3	3	4	4	4	2	3	4	5	4	5	2	3	3	3	3	3	3	4	2	
131	1	1	1	3	1	1	1	2	5	1	3	4	3	5	4	5	3	3	3	2	4	4	5	4	3	2	3	3	3	4	2	5	2	
132	1	1	1	3	2	2	1	1	4	1	2	2	2	4	4	4	3	3	3	3	4	4	4	3	5	2	1	2	3	4	3	1	4	3
133	1	1	1	3	1	1	1	1	4	1				3	4	3	4	4	3	4	4	5	5	3	5	3	2	2	4	3	4	2	4	4
134	1	1	1	1	9	1	1	1	4	1				4	3	3	2	4	3	4	2	5	3	3	4	2	2	3	2	3	4	1	4	3
135	1	1	1	3	3	1	1	2	4	1	4	4	4	5	5	4	4	4	5	4	4	5	5	4	5	3	4	3	4	4	4	3	4	4
136	1	1	1	3	1	2	1	1	5	1	1	1	1	5	5	5	5	3	3	3	3	5	5	5	5	3	3	3	4	5	5	3	5	4
137	3	1	1	3	1	2	1	1	4	1	5	3	1	5	5	5	5	5	4	3	3	5	5	5	5	5	3	3	4	4	3	1	4	2
138	2	2	1	1	8	1	1	1	5	2	2	2	2	4	4	4	3	4	3	5	3	5	4	4	4	4	4	3	3	3	4	2	4	3
139	3	1	1	1	6	1	1	1	5	1	1	3	5	4	4	4	3	4	2	3	2	5	5	3	4	2	4	2	4	3	4	4	4	4
140	3	1	1	1	9	1	1	1	3	1	1	1	1	5	5	5	4	4	3	4	2	5	5	5	5	3	3		2	3	2	2	4	3
141	3	1	1	3	2	1	1	1	4	1	4	3	2	5	4	4	4	3	5	3		5	5	4	5	3	4	4	4	4	3	3	3	3
142	3	1	1	3	1	2	1	2	5	1	5	2	2	5	5	5	4	4	3	3	3	5	5	5	5	3	4	5	4	3	4	3	4	2
143	3	1	1	1	2	2	1	2		1	1	3	1	4	4	4	3		4	3	2	4	4	2		2	4	3	2	4	4	1	4	4
144	1	1	1	3	2	2	1	2	4	1	4	3	3	4	4	5	3	2	3	2	3	2	4	3	5	1	2	3	2	2	3	1	5	2
145	1	1	1	3	2	2	1	1	4	2	4	2	2	4	4	5	4	4	5	3	2	4	5	5	5	1	4	4	2	3	4	2	5	2
146	1	1	1	1	10	1	1	2	5	2	2	2	3	4	4	4	3	4	4	3	3	4	4	4	4	4	3	3	4	4	4	2	3	3
147	1	1	1	3	1	1	1	2	5	1				5	4	4	4	4	3	3	2	5	5	5	5	2	4	2	2	4	3	2	4	2
148	1	1	1	3	1	2	1	2	4	1	2	2	4	5	5	5	4	3	4	3	5	5	5	5	5	4	4	4	4	4	3	2	2	3
149	1	1	1	4	4	1	1	1	4	1	2	2	2	5	5	4	4	5	3	2	3	5	5	5	5	4	5	3	4	4	5	3	4	4
150	4	2	1	3	1	2	1	2		2				5	5	5	5	3	2	4	2	5	5	2	5	3	1	1	3	3	3	1	3	2
151	1	1	1	2	20	1	1	1	5	1				4	3	4	2	5	3	4	2	5	3	3	3	3	5	3	2	2	4	1	5	3
152	1	1	1						5	1				5	5	5	5	3	4	3	3	5	5	5	5	3	3	4	5	5	4	3	5	4
153	1	1	1	1	16	2	1	1	3	1	1	2	2	5	5	4	4	3	2	3	2	5	5	4	5	2	4	2	4	3	4	2	4	4
154	1	1	1	2	20	1	1	1	5	1	1	4	4	5	5	2	2	2	4	4	3	5	5	3	4	3	4	3	2	4	5	2	4	3
155	2	2	1	1	11	1	1	1	4	2	2	1	4	5	3	5	4	3	3	4	2	5	3	5	5	2	5	3	3	3	5	2	4	4

Table 2
Responses to Questionnaire

ID#	LOC	CO	ARR	Q34	Q35	Q36	Q37	Q38	Q01	Q02	Q3A	Q3B	Q3C	Q4A	Q4B	Q4C	Q4D	Q4E	Q05	Q06	Q07	Q08A	Q08B	Q08C	Q08D	Q08E	Q08F	Q10	11A	11B	11C	11D	11E	Q12	
157	1	1	1	1	12	1	1	1	4	1	1	3	3	4	4	4	4	3	3	2	4	4	4	3	5	3	4	3	3	4	4	3	3	2	
158	1	1	1	1	1	1	1	1	4	1	2	4	5	5	3	5	3	3	3	4	3	5	5	4	4	3	4	4	3	3	4	1	4	1	
159	1	1	1	2	12	1	1	1	3	1				3	4	4	3	3	4	4	3	5	5	4	4	4	4	3	2	3	4	2	4	4	
160	1	1	1	1	7	1	1	1	4	2	1	1	3	4	4	4	3	5	4	3	4	5	5	3	4	4	3	4	2	2	4	1	5	4	
161	1	1	1	2	13	1	1	2	4	1				5	4	5	4	3	3	4	3	5	5	5	4	3	4	4	4	4	3	4	2	3	2
162	2	2	1	1	9	1	1	1	3	2	3	4	3	5	5	4	4	3	5	3	2	5	5	4	4	2	4	4	4	3	3	4	2	4	2
163	1	1	1	1	7	1	1	1	4	1	4	4	2	4	4	4	4	2	4	3	3	4	4	4	5	2	4	4	3	3	3	1	4	3	
164	1	1	1	3	1	2	1	2	4	1	4	3	2	4	4	4	3	3	3	2	3	4	5	5	4	2	3	4	4	3	3	2	5	2	
165	1	1	1	3	1	1	1	2	4	2	4	3	3	5	5	5	5	5	4	3	3	5	5	5	5	5	3	3	3	3	4	3	2	5	2
166	1	1	1	3	1	1	1	1	4	1	1	2	3	4	4	4	4	3	4	3	3	4	5	5	5	3	4	3	4	4	4	3	3	4	
167	4	2	1	3	2	2	1	1	4	2	1	5	5	4	4	5	3	3	3	4	3	5	5	4	5	3	4	2	4	2	4	1	4	4	
168	3	1	1	1	1	1	1	1	5	1	1	1	1	5	5	5	5	5	3	4	3	5	5	5	5	3	4	3	3	3	3	3	4	4	
169	4	2	1	4	4	2	1	1	4	2				5	4	4	3	3	5	1	2	5	5	3	5	3	1	3	5	4	5	1	5	4	
170	3	1	1	1	9	1	1	2	4	2	3	5	4	4	4	4	4	4	5	4	3	5	4	4	5	3	4		3	4	4	3	5	3	
171	2	2	1	3	2	2	1		3	2	4	3	2	4	4	4	3	3	5	3	3	5	4	3	4	3	3	4	3	3	4	2	4	3	
172	1	1	1	3	1	1	1	2	4	1	5	2	1	5	3	5	4	3	4	4	4	5	5	5	4	2	4	4	4	4	2	5	2	5	4
173	1	1	1	2	18	1	1	1	4	1	1	4	5	4	4	3	4	4	2	4	4	4	5	4	5	4	4	3	3	4	5	3	4	4	
174	4	2	1	4	2	1	1	1	5	1	2	4	4	5	4	4	3	3	3	4	4	5	4	4	5	3	4	2	4	4	3	3	4	3	
175	1	1	1	4	2	2	1	2	5	1		3		5	5	5	5	5	5	3	4	5	5	5	5	3	3	3	4	4	5	1	4	3	
176	4	2	1	3	1	1	1	1	4	1	1	1	1	5	4	5	3	2	2	4	3	5	5	3	5	1	2	2	4	4	5	3		4	
177	2	2	1	3	1	2	1	2	4	2	1	1	1	4	4	5	5	5	3	5	4	4	4	4	5	2	4	3	3	4	4	3	3	3	
178	4	2	1	4	3	2	1	2	3	1	5	2	1	5	4	4	3	3	4	3	2	5	5	4	5	2	3	3	3	4	3	1	4	4	
179	4	2	1	1	10	1	1	1	3	2	4	3	2	4	4	4	3	3	5	3	2	5	4	3	4	2	3	3	3	4	2	4	2	4	
180	2	2	1	4	4	1	1	1	4	2	3	4	4	4	4	4	3	2	4	4	3	3	5	4	4	1	4	3	2	3	2	2	3	2	
181	1	1	1	3	2	2	1	2	5	1	1	1	1	5	5	4	4	2	3	4	3	5	5	4	5	2	4	2	4	4	3	2	4	5	
182	2	2	1	1	6	2	1	1	3	2	2	2	4	5	4	5	2	4	3	3	2	5	5	5	4	2	4	3	2	2	4	3	4	2	
183	2	2	1	3	1	1	1	1	3	2				3	4	4	4	4	3	3	3	4	4	4	5	3	3	4	3	4	3	2	3	3	
184	3	1	1	1	8	1	1	2	5	1	4	3	4	4	4	3	5	3	3	4	3	5	5	3	5	3	4	3	4	4	4	3	5	4	
185	3	1	1	2	24	1	1	1	4	1	1	1	1	5	4	4	4	3	3	4	2	5	5	4	4	2	4	3	4	4	4	2	3	2	
186	2	2	1	4	4	1	1	1	4	2	3	3	4	5	5	4	4	4	3	3	3	5	5	4	5	4	4	4	2	4	3		3	4	
187	2	2	1	1	7	1	1	1	2	1	4	3	2	4	3	4	3	3	4	4	3	4	3	4	4	3	3	4	3	3	3	2	4	3	
188	2	2	1	1	8	1	1	1	4	2	1	1	1	4	4	4	3	3	3	4	3	5	5	5	5	2	4	4	1	4	4	1	4	3	
189	2	2	1	3	1	1	1	1	5	2	2	3	3	5	4	3	4	4	4	4	4	5	3	5	3	5	4	3	2	5	2	5	4	2	
190	2	2	1	3	1	1	1	2	5	2	3	3	3	5	5	5	5	4	4	4	3	4	5	5	5	3	4	5	3	3	3	2	4	2	
191	2	2	1	3	1	2	1	1	4	2	5	2	2	5	4	3	4	4	4	4	2	5	4	3	5	2	3	5	3	3	4	1	5	2	
192	1	1	1	4	6	1	1	2	3	1	2	4	4	4	4	2	4	3	4	2	3	5	4	3	5	3	2	3	4	4	4	2	4	2	
193	4	2	1	2	23	1	1	1	5	1				5	4	4	4	3	3	4	2	5	5	5	5	3	3	1	4	4	4	3	4	1	
194	1	1	1	4	6	1	1	1	4	2	3	4	1	5	3	3	4	2	5	3	3	5	4	2	5	2	3	3	2	2	2	2	2	1	
195	2	2	1	3	2	1	1	2	4	2	4	3	1	4	4	5	4	3	4	3	4	5	5	5	5	4	4	5	4	4	4	3	3	3	
196	2	2	1	3	1	2	1	1	5	2	4	3	2	5	4	4	5	4	4	3	3	5	5	5	5	3	4	5	4	4	3	3	5	1	
197	2	2	1	1	7	1	1	1	3	2	3	4	4	5	4	4	3	2	3	4	3	5	5	3	5	1	5	3	3	3	4	2	5	4	
198	2	2	1	4	5	1	1	1	4	2	2	3	3	5	5	4	3	3	4	4	2	5	5	4	5	2	5	3	2	3	3	2	5	3	
199	3	1	1	1	9	1	1	2	3	1	2	4	4	4	4	4	4	4	3	4	3	5	5	4	5	3	4	2	3	3	4	3	4	3	
200	3	1	1	1	4	2	1	1	4	1	2	4	4	4	4	4	4	4	3	2	3	4	4	4	4	3	3	2	4	3	4	2	5	3	
201	2	2	1	4	3	1	1	1	3	2	4	2	1	4	4	4	3	4	5	3	2	5	5	5	4	3	3	4	3	4	4	2	4	2	
202	3	1	1	4	3	2	1	2	5	1	3	5	5	4	5	4	5	3	4	4	3	5	5	5	5	3	2	4	4	4	4	3	3	4	
203	2	2	1	3	1	2	1	2		2				5	5	4	5	4	5	3	3	5	5	3	5	3	3	3	2	4	5	3	5	3	
204	3	1	1	3	1	1	1	1	4	1	4	3	4	5	3	4	4	5	3	2	3	5	4	4	5	2	2	4	3	4	4	3	5	4	
205	2	2	1	1	7	1	1	1	2	2	4	3	3	4	4	4	3	3	5	4	1	4	5	4	4	3	4	3	3	4	4	1	4	2	
206	2	2	1	4	1	1	1	1	3	2	1	1	1	4	4	5	3	5	3	4	2	5	5	5	5	3	4	5	3	3	4	2	5	3	
207	2	2	1	3	1	1	1	1	5	2	3	3	2	4	5	4	5	3	3	4	3	5	5	4	5	2	4	2	3	4	3	2	3	4	
208	2	2	1	4	2	1	1	2	4	2	3	2	3	4	4	5	3	3	3	4	4	4	4	5	5	3	5	3	3	4	4	3	4	4	
209	1	1	1	3	1	2	1	1	5	1	4	3	1	4	5	5	4	4	5	3	3	4	5	5	5	4	4	4	3	4	4	2	5	3	
210	4	2	1	1	10	1	1	2	3	2	4	3	1	5	5	5	3	3	4	3	2	4	4	4	4	3	4	3	3	3	3	1	5	2	
211	2	2	1	4	4	1	1	2	3	2	3	3	3	5	4	3	3	4	3	3	2	5	4	4	5	4	3	3	3	3	3	1	5	2	
212	2	2	1	4	3	1	1	1	5	2	3	3	4	5	5	5																			

Table 2
Responses to Questionnaire

ID#	LOC	CO	ARR	Q34	Q35	Q36	Q37	Q38	Q01	Q02	Q3A	Q3B	Q3C	Q4A	Q4B	Q4C	Q4D	Q4E	Q05	Q06	Q07	Q0A	Q0B	Q0C	Q0D	Q0E	Q09	Q10	11A	11B	11C	11D	11E	Q12
214	2	2	1	4	5	1	1	1	4	1	4	3	2	5	4	4	3	4	4	4	3	5	5	5	5	4	4	5	4	4	5	4	5	2
215	2	2	1	1	8	1	1	1	3	2	4	2	1	5	5	4	3	2	5	4	3	5	5	4	5	1	2	3	3	3	4	2	4	2
216	3	1	1	2	13	1	1	1	4	2	2	2	2	4	4	4	4	4	2	4	3	5	5	4	5	3	3	3	3	3	4	3	5	3
217	2	2	1	1	7	1	1	1	3	2	1	1	1	4	4	5	3	4	5	3	3	5	5	5	4	3	4	3	3	3	3	3	5	1
218	1	1	1	2	25	1	1	1	5	2	1	3	3	4	4	4	4	4	3	4	3	5	5	4	5	4	4	2	3	3	5	4	4	2
219	2	2	1	3	2	2	1	2		2	5	4	1	4	4	5	2	1	4	2	3	3	5	5	5	1	5	5	4	4	4	1	3	3
220	3	1	1	4	3	1	1	1	5	1				5	5	5	5	5	3	3	3	5	5	5	5	4	3	3	5	5	5	4	5	1
221	2	2	1	4	4	1	1	1	2	2	1	2	3	5	5	5	3	3		4	2	5	5	5	5	3	5	3	5	5	5	1	2	3
222	2	2	1	3	1	2	1	1	4	1	1	1	1	5	4	4	4	3	3	5	4	5	5	5	4	3	4	2	4	4	3	2	5	4
223	2	2	1	4	3	1	1	2	3	2	4	5	4	5	5	5	5	4	4	5	3	4	5	5	5	3	5	4	2	5	4	2	5	3
224	2	2	1	1	7	1	1	1	3	2	4	2	2	4	4	5	3	4	5	3	2	4	4	4	5	3	4	4	3	3	4	2	4	3
225	2	2	1	1	7	1	1	2	2	2	2	2	4	5	5	5	4	4	3	5	2	5	5	5	5	4	3	3	4	4	4	3	3	3
226	3	1	1	1	6	1	1	1	4	1	3	2	3	4	3	5	3	3	3	4	1	4	3	5	5	3	1	2	3	3	4	3	4	2
227	3	1	1	3	1	2	1	1	4	1	1	4	4	5	5	5	4	4	2	4	3	5	5	5	5	3	4	4	5	5	5	5	5	4
228	2	2	1	4	4	1	1	1	3	2	2	3	5	5	4	4	4	4	4	3	2	5	4	5	4	3	3	4	4	4	3	3	3	3
229	2	2	2	4	3	1	1	1	5	2	2	4	4	5	3	3	3	4	5	3	1	5	4	3	4	3	5	4	3	3	5	1	5	2
230	2	2	2	1	10	1	1	2	4	2	2	2	2	5	5	5	3	3	3	3	3	5	5	5	5	3	4	3	4	4	4	2	4	2
231	1	1	2	1	18	1	1	1						5	3	5	4	3	4	4	2	5	4	5	5	3	5	4	3	4	4	3	5	2
232	2	2	2	4	3	1	1	1	4	2	2	3	1	5	5	5	5	5	5	4	4	5	5	5	5	4	4	2	4	3	3	2	4	2
233	2	2	2	1	6	1	1	2	5	2	1	1	1	5	5	4	3	2	3	4	3	5	5	4	5	1		4	2	4	4	2	4	3
234	2	2	2	4	4	1	1	1	3	2	2	4	4	4	4	4	4	4	4	4	3	5	4	5	4	3	4	4	2	2	4	2		3
235	2	2	2	1	7	1	1	2	4	2	3	3	2	5	5	5	4	4	5	3	3	5	5	5	5	4	3	3	2	4	5	2	5	4
236	4	2	2	1	7	1	1	2	5	2				5	4	4	4	3	4	3	3	5	5	4	5	2	4	1	3	3	3	2	2	1
237	1	1	2	1	6	1	1	1	4	1	2	3	3	5	5	4	4	4	4	3	3	5	5	4	5	3	3	3	3	4	4	2	4	2
238	4	2	2	4	4	1	1	1	3	2				5	4	4	3	4	4	4	2	5	5	5	5	3	4	3	3	3	4	2	4	2
239	1	1	2	3	1	2	1	2	4	1	1	1	1	4	3	3	5	2	5	2	2	5	5	3	5	1	2	4	3	2	5	3	5	3
240	4	2	2	4	3	1	1	2	2	2	1	3	2	5	3	4	3	2	4	2	3	5	4	4	4	2	3	2	3	3	2	2	2	4
241	4	2	2	3	1	2	1	1	5	2	3	1	1	5	5	5	5	4	4	3	3	5	5	5	5	1	5	4	1	4	5	3	5	4
242	1	1	2	4	4	1	1	2	4	1	3	2	3	4	4	4	3	4	5	5	4	5	5	5	5	2	1	2	3	2	3	1	3	2
243	2	2	2	3	1	1	1	2		2	3	3	3	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	3	3	3
244	1	1	2	3	1	2	1	2		1																								
245	2	2	2	3	1	2	1	2	3	1	4			5					4	4	3			5			5	3			5		2	
246	4	2	2	4	1	1	1	1	4	2	3	2	2	5	4	4	3	3	5	4	3	4	5	3	5	2	3	4	3	4	5	2	5	2
247	2	2	2	3	2	1	1	1	4	2	1	1	2	5	5	4	4	2	3	3	3	5	5	4	5	1	5	5	4	4	4	3	4	1
248	4	2	2	3	2	2	1	1	5	1	1	1	1	5	5	5	4	3	3	4	3	5	5	5	5	3	4	3	4	4	4	2	3	3
249	2	2	2	3	1	2	1	2	3	2	5	3	1	4	4	4	4	4	2	2	3	4	4	4	4	4	4	3	4	4	3	2	4	3

Table 3
Responses to Questionnaire

ID#	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	23A	23B	23C	23D	23E	Q24	Q25	Q26	Q27	Q28	Q29	Q30	31A	31B	31C	31D	32A	32B	32C	32D	33A	33B	33C	33D	
100	3		5	4	2	2	3		3	5	5	3	4	3	5	2	4	5	3	4	5	4	5	2	4	4	5	4	4	3	5	3	4	5	
101	2	4	4	1	2	2	2	3	2	4	5	3	4	3	4	3	4	5	3	4	5	4	4	2	4	4	5	4	5	4	5	3	4	4	
102	2	2	3	4	2	4	3	1	4	4	4	4	4	3	3	2	4	4	4	4	5	4	4	3	5	4	5	4	5	3	5	3	5	4	
103	1	3	4	3	2	5	3	1	3	4	5	4	3	3	4	2	2	3	1	3	5	2	2	2	4	4	5	4	4	3	5	4	5	4	
104	3	3	4	3	2	3	2	1	2	3	4	4	4	4	3	3	4	4	3	3	3	3	4	3	4	3	4	4	4	3	4	4	4	3	
105	2	3	4	1	2	5	3	1	2	4	4	3	4	3	4	2	4	3	3	4	3	3	3	3	4	4	5	4	5	5	4	3	4	4	
106	4	2	4	4	1	2	4	2	3	4	5	5	5	4	4	2	5	4	4	4	4	4	4	3	2	3	5	5	5	4	4	5	5	5	
107	3	2	3	4	2	4	3	1	3	4	4	4	5	3	4	1	3	1	1	3	5	1	4	3	4	5	5	4	5	4	5	3	5	5	
108	2	3	3	3		3	4	4	2	2	5	4	4	3	3	1	3	5	5	4	5		4	2	3	4	5	4	4	3	5	3	4	4	
109	4	4	5	4	2	3	2	3	4	5	1	4	4	3	5	3	3	3	3	2	4	2	1	1	3	5	1	4	5	5	1	3	4	5	
110	3	4	3	4	1	1	3	1	2	2	4	4	4	4	4	5	3	1	1	3	5	2	4	2	3	4	4	3	4	3	4	3	4	4	
111	3	4	4	3		3	4	1	2	4	4	4	3	4	4	2		5	2	3	3	3	4	2	4	4	4	4	5	3	5	3	5	5	
112	1	4	4	4		2	3	3	3	3	4	4	4	3	4	3	3	2	2	4	5	3	3	2	4	5	4	3	5	5	4	3	5	5	
113	1	2	5	1	2	2	3	3	2	5	5	5	5	3	3	1	4	4	2	3	5	3	3	3	5	5	5	4	5	4	4	4	5	5	
114	3	3	3	3	2	2	3		2	5	4	4	3	3	3	2	3	3	3	4	3	4	2	2	2	5	3	3	3	4	3	2	3	4	
115	1	2	3	4	2	5	2	4	3	4	4	4	5	3	5	3	2	4	4	4	5	1	3	1	3	5	5	3	4	3	4	3	4	5	
116	1	1	4	1	1	4	4	3	3	4	5	4	3	3	3	3	1	1	2	5	3	4	1	5	4	4	3	5	4	4	2	5	4	5	
117	1	5	5	4	2	5	4	3	4	5	5	5	5	3	4	3	1	5	5	4	5	1	5	2	4	4	5	5	5	3	5	5	5	5	
118	4	4	5	3		4	4	4	4	5	5	5	5	4	5	4	4		3	5	5	4	4	5	4	5	5	5	5	5	5	4	5	5	
119	2	3	5	4	2	3	3	4	3	3	4	4	5	4	4	2	3	3	3	4	2	3	2	2	5	5	5	5	5	3	4	5	3	5	5
120	5	4	3	3	1	3	4	3	4	2	5	4	5	4	4	3	4	4	3	1	4	4	3	2	4	4	5	4	4	2	5	4	4	2	
121	1	1	5			1	3	1	2	3	3	3	3	3	4	5	1	3	3	4	5	1	1	1	3	5				3	3	3	4		
122	2	3	4	1	2	2	2	3	2	4	5	4	5	3	5	3	4	4	4	2	4	3	4	2	3	4	5	3	5	5	2	4	4	4	
123	2	2	4	1	2	5	4		2	2	5	4	4	3	4	3	4	4	1	2	2	2	4	2	5	4	5	5	4	5	3	5	3	5	4
124	2	3	3	1	2	1	2	3	2	2	4	4	4	4	3	3	2	2	3	3	3	3	3	3	3	4	4	4	4	4	3	4	3	4	4
125	4	3	3	3		4	2	4	3	4	5	5	5	3	5	3	3	3	3	5	4	2	2	1	4	4	5	4	4	3	5	3	5	4	4
126	2	2	4	4		4	4	1	4	3	5	5	5	5	5	3	4		5	4	5	3	5	3	5	5	5	5	5	4	5	4	5	5	
127	1	4	5	3	2	3	5	2	5	5	5	5	5	5	5	2	2	5	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
128	3	3	4	3	1	3	2	4	3	3	5	5	5	3	5	4	4	4	2	4	5	3	4	1	5	5	5	5	5	5	5	5	5	5	5
129	3	4	4	3		3	4	4	4	3	4	4	4	2	4	2	3	3	4	4	4	4	3	4	3	4	4	4	4	4	4	4	4	4	4
130	2	2	3	3	2	1	2	3	3	4	3	3	4	2	4	2	2	3	2	3	4		1	1	4	4	3	4	5	3	3	3	4	4	4
131	4	1	4	3	2	4	3	3	2	2	5	4	5	3	4	3	3	4	4	3	5	4	4	2	5	5	5	4	5	1	5	2	5	5	5
132	2	2	4	3		1	4	3	3	5	4	4	4	2	2	3	3	4	4	3	5	3	4	2	4	4	4	4	4	3	4	3	4	4	4
133	4	3	4	1		2	4	3	3	5	5	5	5	3	5	2	3	3	2	3	3	3	5	3	4	4	5	5	4	4	5	4	5	5	5
134	2	4	5	4	2	4	2	3	2	4	4	3	4	1	4	3	4	4	1	3	4	3	2	1	3	4	4	3	4	3	4	3	4	5	5
135	3	4	5	4	1	2	2	3	4	5	5	5	4	4	4	2	5	5	4	3	4	4	3	3	4	4	4	4	4	4	5	4	5	4	4
136	3	3	5	3	2	4	3	3	3	5	5	5	5	3	4	3	5	5	1	4	5		3	3	5	5	5	5	5	3	5	3	5	5	5
137	1	2	3	1	2	1	2	1	3	3	5	4	4	3	4	2	3	1	1	3	4	3	4	2	4	4	5	5	5	5	3	4	5	5	5
138	4	3	4	3	2	3	3	4	3	4	3	4	4	3	4	4	4	4	4	4	4	4	3	3	3	4	4	4	3	4	4	3	3	4	4
139	2	3	4	1	2	2	2	3	1	3	4	4	4	3	4	3	5	5	1	3	4	4	4	4	4	4	4	4	4	4	5	4	4	4	4
140	2	3	5	1	2	5	2	3	4	5	4	3	3	3	5		4	4	4	4	4	1	3	2	4	4	4	4	4	3	4	3	5	4	4
141	3	3	3	3	2	3	4	1	3	4	5	4	4	3	4	4	4	4	2	4	5	3	4	2	4	4	5	4	4	4	5	3	4	4	4
142	2	2	4	4	1	3	3	1	4	3	5	4	5	4	5	3	2	2	3	5	3	4	2	4	4	4	5	5	4	5	4	5	4	5	4
143	2	3	3	1	2	2	2	3	2	4	4	4	4	2	4	2	3	5	2	4	4	2	4	1	3	4	4	4	4	2	4	2	4	4	4
144	1	4	3	1	2	4	2	4	2	4	5	3	5	3	5	2	3	3	3	4	4		2	1	4	5	3	4	4	3	5	2	4	5	5
145	2	1	4	1	2	4	2	1	2	1	5	4	4	2	5	3	4	2	3	2	5	1	2	1	4	5	4	4	4	4	5	2	4	5	5
146	2	3	4	1	2	2	3	3	2	4	4	4	3	4	3	3	4	2	3	4	2	4	3	3	4	4	4	4	4	4	3	4	4	4	4
147	4	3	3	3		4	3	3	2	4	4	4	5	4	5	3	4	4	4	4	4	2	2	4	5	4	4	5	4	4	4	4	5	5	5
148	3	4	4	4	1	3	4	3	3	4	4	4	4	3	3	3	3	3	2	4	3	2	4	2	3	3	4	4	4	3	4	3	4	4	4
149	3	3	5	3	1	2	4	3	4	5	5	5	5	3	5	2	3	4	4	4	5	4	4	3	4	5	5	5	5	5	4	5	4	4	5
150	1	5	3	4	2	1	1	3	1	5	5	5	5	3	2	2	4	5	1	4	5	4	4	2	5	2	4	4	5	2	5	3	5	3	5
151	2	5	5	4	2	2	1	3	2	5	4	3	5	2	5	3	4	5	5	3	5	4	2	1	5	4	4	3	5	4	3	3	5	4	4
152	4	2	5																																
153	3	3	5	1	2	3	4	3	2	4	5	4	4	3	4	3	4	2	2	3	5	2	4	3	3	4	5	5	4	5	3	4	4	4	4
154	3	4	4	3	2	1	4	3	4	4	4	4	5	3	4	3	5	5	1	4	5	3	3	2	4	4	4	5	5	4	4	3	5	5	5
155	3	4																																	

Table 3
Responses to Questionnaire

ID#	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	23A	23B	23C	23D	23E	Q24	Q25	Q26	Q27	Q28	Q29	Q30	31A	31B	31C	31D	32A	32B	32C	32D	33A	33B	33C	33D		
158	3	3	4	4	2	1	2	3	3	5	4	4	5	2	4	3	4	5	2	3	4	4	4	3	5	3	4	4	5	3	4	3	5	3		
159	3	3	4	3	2	4	2	3	3	5	4	4	4	3	4	3	4	4	3	4	5	2	2	2	4	4	3	3	4	3	4	3	4	3		
160	3	2	4	4	1	3	2	3	4	2	3	4	5	3	5	2	4	4	2	4	5	1	2	2	4	5	4	4	4	4	3	3	3	5		
161	3	4	5	4	2	2	2	3	4	4	4	4	4	3	3	4	4	4	4	4	4	4	4	2	3	3	5	4	5	3	4	4	4	3		
162	3	5	5	3		4	4	3	3	4	4	4	4	3	4	4	3	4	3	3	1	2	5	2	3	3	5	4	5	4	4	3	4	3	4	4
163	2	3	3	4		4	3	1	2	2	4	3	3	3	4	2	3	4	2	4	2	4	2	2	2	4	4	4	4	3	2	4	3	4	4	
164	3	2	4	4	2	3	4	1	4	4	5	4	4	3	5	2	3	2	2	3	5	3	4	2	4	4	4	4	4	3	4	5	3	4	5	
165	4	3	3	3	1	3	4	4	3	4	5	4	5	4	5	2	3	2	2	3	4	2	4	3	4	4	4	4	4	4	4	4	4	4	4	
166	4	3	4	3		3	3	3	3	5	4	4	4	3	4	3	4	4	4	4	3	3	4	3	4	3	4	4	4	3	4	4	4	4	3	
167	1	4	5	1	2	1	2	3	1	5	5	5	5	3	5	2	3	5	5	5	5	5	5	5	5	5	5	5	4	5	4	5	5	5	4	
168	4	4	5	4		2	3	3	3	4	5	4	4	3	5	3	4	5	5	4	4	3	3	4	4	5	4	5	4	5	4	5	4	5	5	
169	1	3	4	1	2	2	5	3	2	4	5	5	4	3	4	3	2	4	1	4	5	2	5	1	4	3	5	3	5	3	5	2	5	3		
170	4	4	4	4		1	3	3	3	4	4	4	4	3	5	2	5	4	4	3	4	4	5	2	2	4	4	4	4	4	4	3	5	5	4	
171	3	2	2	3	2	2	4		3	4	4	4	4	3	4	1	3	4	2	4	5	3	3	3	4	4	4	4	4	5	4	4	3	4	4	
172	3	2	5	3	1	1	2	1	3	4	5	4	5	3	5	3		5	2	4	5	5	4	2	5	5	5	4	5	4	5	5	4	3		
173	3	4	4	4		2	4	3	4	4	3	3	4	3	5	3	2	4	3	4	5	2	3	2	4	4	4	4	4	4	4	3	4	4		
174	3	4	4	4	2	2	3	1	3	4	5	4	4	3	4	3	3	4	3	4	4	4	3	3	4	4	4	4	4	4	4	3	4	4	5	
175	1	3	4	4	2	4	1	3	3	5	5	5	5	2	4	3	4	5	1	3	5	1	3	1	4	4	5	5	5	5	5	2	5	5		
176	3	4		3	2	2	4	3	3	5	5	4	5	3	4	3		3	3	5	4	3	4	3	5	4	5	5	5	3	5	4	5	4		
177	4	3	5	3	4	1	5	3	4	5	5	4	4	3	4	2	4	1	1	4	4	4	3	3	4	5	5	5	4	3	5	4	5	5		
178	1	4	4	1	2	4	3	3	3	4	4	4	4	3	3	4	2	4	2	4	5	3	2	2	5	4	5	3	5	4	4	3	5	4		
179	3	3	3	1	2	4	3	1	2	4	4	3	4	2	4	2	3	4	2	3	4	3	3	4	4	4	4	4	4	4	4	4	3	4	4	
180	3	2	4	4	2	4	4	1	4	4	4	4	4	3	3	4	5	5	2	2	4	2	3	2	3	4	4	4	3	3	4	4	4	4		
181	2	4	5	4		2	2	3	3	4	5	4	4	3	3	2		5	2	4	2		3	1	5	4	5	4	5	3	5	3	5	3		
182	1	2	3	1	2	1	3	3	2	4	4	3	4	1	5	3	3	4	2	3	5	4	2	2	4	4	4	4	4	4	3	2	4	4		
183	3	2	3	3	1	4	3	3	2	3	4	4	4	3	4	3	3	3	3	3	5	3	2	2	2	4	4	4	4	4	2	4	3	4	4	
184	3	3	3	3		2	2	1	3	4	4	4	4	3	4	3	3	4	4	4	4	3	3	3	4	4	4	4	4	4	3	4	4	4	4	
185	2	4	3	4	2	5	4	3	2	3	4	4	4	3	2	4	4	2	4	4	5	3	4	3	4	4	5	4	5	4	4	3	5	4		
186	4	3	5	3	2	3	3		3	5	4	5	4	4	4	3	4	4	4	4	5	4	3	3	5	4	5	4	5	4	4	4	4	5	4	
187	2	3	3	4	2	4	2	1	2	3	4	3	3	3	4	4	3	5	3	3	5	3	3	2	3	4	4	4	3	4	4	4	3	4	4	
188	3	4	4	3	2	3	3	4	4	5	4	4	4	3	4	2	4	5	4	3	3	3	1	2	4	4	4	4	3	4	3	4	2	4	4	
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Figure 1
Survey Respondents by Firm

- **Deloitte & Touche LLP**
 - 40 respondents from the Pittsburgh office
 - 42 respondents from the Columbus office

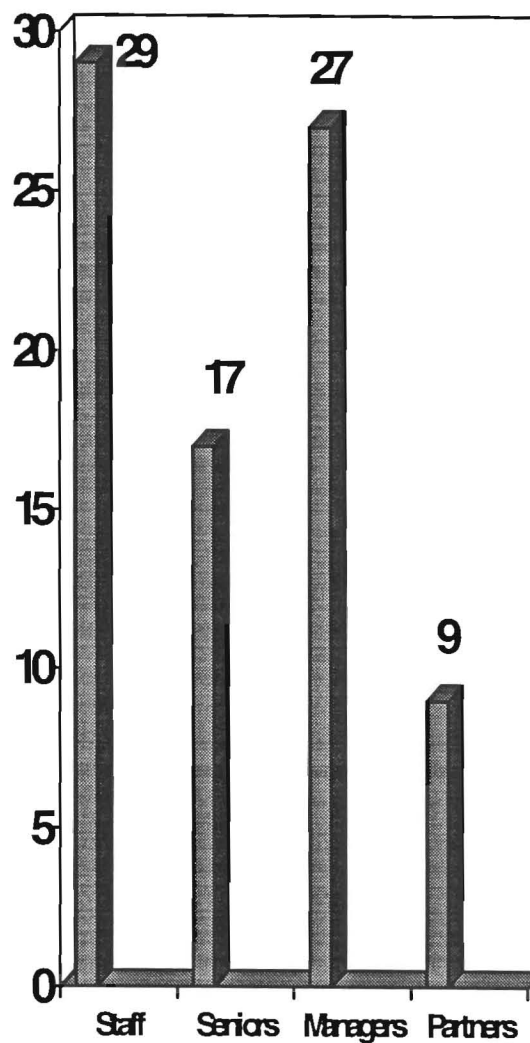
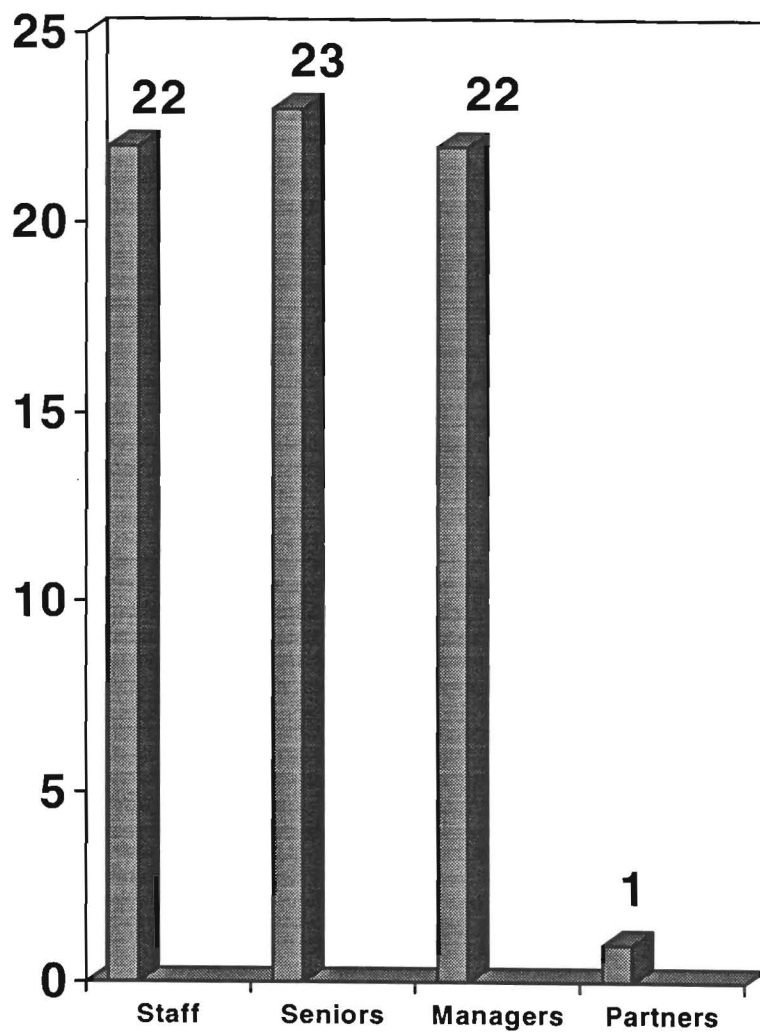


Figure 2
Survey Respondents by Firm



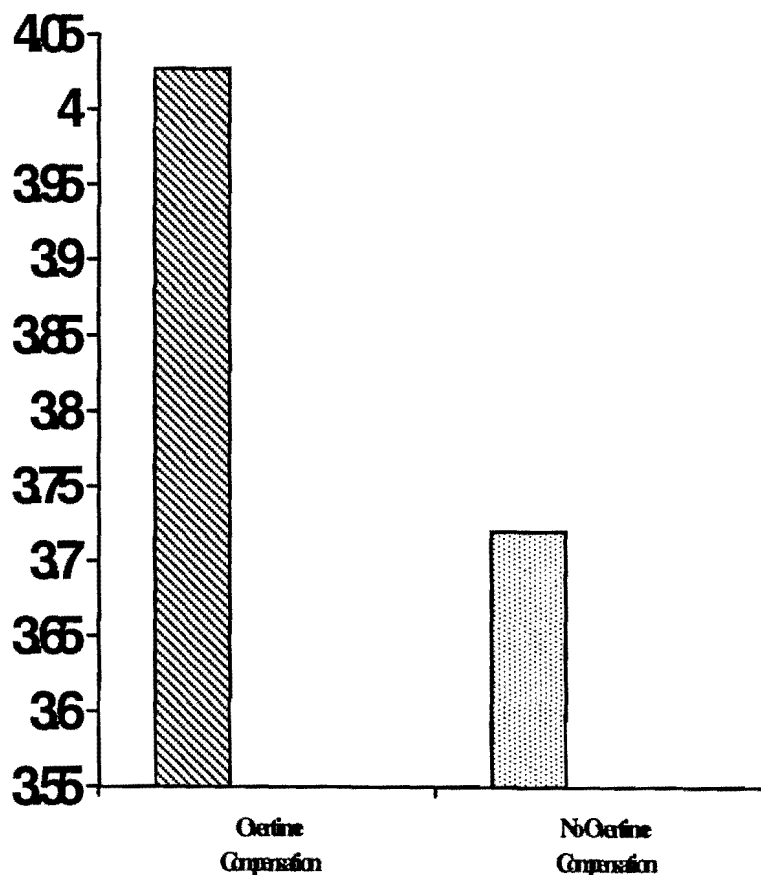
- **Price Waterhouse**
 - 53 respondents from the Pittsburgh office
 - 15 respondents from the Columbus office

Appendix B

Figure 1

Mean Response to Question 15 By Employee Group

Q 15: I would work an extra hour to analyze client needs.



T-TEST ON WILLINGNESS TO WORK OVERTIME IF COMPENSATED 19
13:03 Thursday, August 17, 1995

TTEST PROCEDURE

Variable: Q15

Q2	N	Mean	Std Dev	Std Error
1	73	4.02739726	0.81603041	0.09550914
2	75	3.72000000	0.90881568	0.10494100

Variances	F	DF	Prob> F
Unequal	2.1663	145.1	0.0319
Equal	2.1632	146.0	0.0322

For H0: Variances are equal, $F^* = 1.24$ $DF = (74, 72)$
 $Prob>F^* = 0.3605$

TABLE OF Q34 BY Q36

Q34	Q36		
Frequency			
Expected			
Percent			
Row Pct			
Col Pct	1	2	Total
1	45 34.101 30.41 91.84 43.69	4 14.899 2.70 8.16 8.89	49 33.11
2	10 6.9595 6.76 100.00 9.71	0 3.0405 0.00 0.00 0.00	10 6.76
3	18 34.797 12.16 36.00 17.48	32 15.203 21.62 64.00 71.11	50 33.78
4	30 27.142 20.27 76.92 29.13	9 11.858 6.08 23.08 20.00	39 26.35
Total	103 69.59	45 30.41	148 100.00

Frequency Missing = 2

STATISTICS FOR TABLE OF Q34 BY Q36

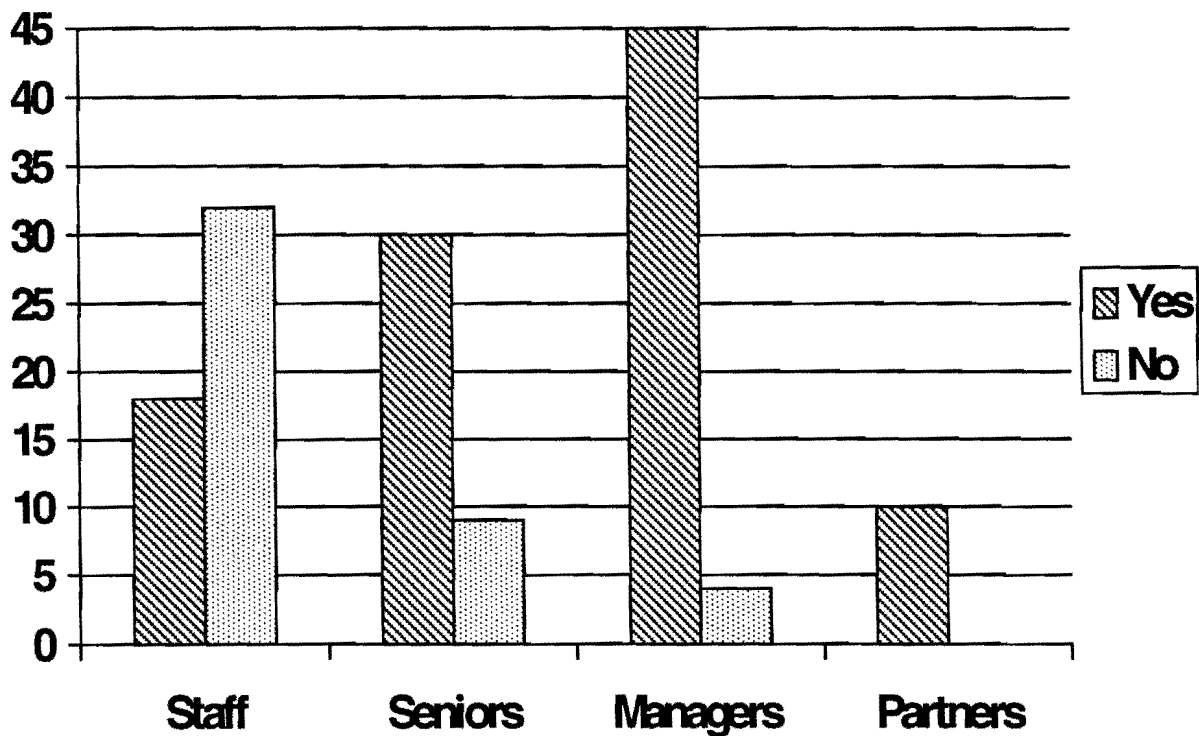
Statistic	DF	Value	Prob
Chi-Square	3	43.482	0.000
Likelihood Ratio Chi-Square	3	46.635	0.000
Mantel-Haenszel Chi-Square	1	10.655	0.001
Phi Coefficient		0.542	
Contingency Coefficient		0.477	
Cramer's V		0.542	

Effective Sample Size = 148
Frequency Missing = 2

Figure 4

Have You Received At Least One Day of Marketing Training?

(frequency of response to Q 36)



Chi-Square Test for Questions 19 and 34

Observed Values

		Question 19				
		1	2	3	4	5
Question 34	1		16	20	10	3
	2	1	2	1	6	
	3	1	15	13	19	1
	4	2	6	14	15	3
		4	39	48	50	7
		0.027027	0.263514	0.324324	0.337838	0.047297
						1

Expected Values

		Question 19				
		1	2	3	4	5
Question 34	1	1.324324	12.91216	15.89189	16.55405	2.317568
	2	0.27027	2.635135	3.243243	3.378378	0.472973
	3	1.324324	12.91216	15.89189	16.55405	2.317568
	4	1.081081	10.54054	12.97297	13.51351	1.891892
		4	39	48	50	7
						148

Calculation of Chi-Square Statistic

	1	2	3	4	5	
1	1.324324	0.738431	1.06196	2.59487	0.200949	5.920535
2	1.97027	0.153084	1.551577	2.034378	0.472973	6.182282
3	0.079426	0.337594	0.526246	0.361401	0.749054	2.053721
4	0.781081	1.955925	0.081306	0.163514	0.649035	3.630861
	4.155102	3.185034	3.221088	5.154163	2.072012	17.7874

Chi-Square Statistic= 17.7874

Chi-Square Test for Questions 10 and 34

Observed Values		Question 10					
		1	2	3	4	5	
Question 34	1	1	8	28	9	1	47
	2	1	1	6	1	1	10
	3	1	8	14	17	8	48
	4	0	6	20	12	2	40
		3	23	68	39	12	145
		0.02069	0.158621	0.468966	0.268966	0.082759	1

Expected Values		Question 10					
		1	2	3	4	5	
Question 34	1	0.972414	7.455172	22.04138	12.64138	3.889655	47
	2	0.206897	1.586207	4.689655	2.689655	0.827586	10
	3	0.993103	7.613793	22.51034	12.91034	3.972414	48
	4	0.827586	6.344828	18.75862	10.75862	3.310345	40
		3	23	68	39	12	145

Calculation of Chi-Square Statistic		1	2	3	4	5	
1	0.000783	0.039816	1.610841	1.048908	2.146747	4.847095	
2	3.04023	0.216642	0.366126	1.06145	0.03592	4.720367	
3	4.79E-05	0.01959	3.217453	1.295494	4.083525	8.61611	
4	0.827586	0.018741	0.08215	0.143236	0.518678	1.590391	
	3.868647	0.294789	5.27657	3.549088	6.78487	19.77396	

Chi-Square Statistic= 19.77396

Figure 7

Are Staff Expected to Identify Opportunities to Market Services?

(frequency of response to Q 19)

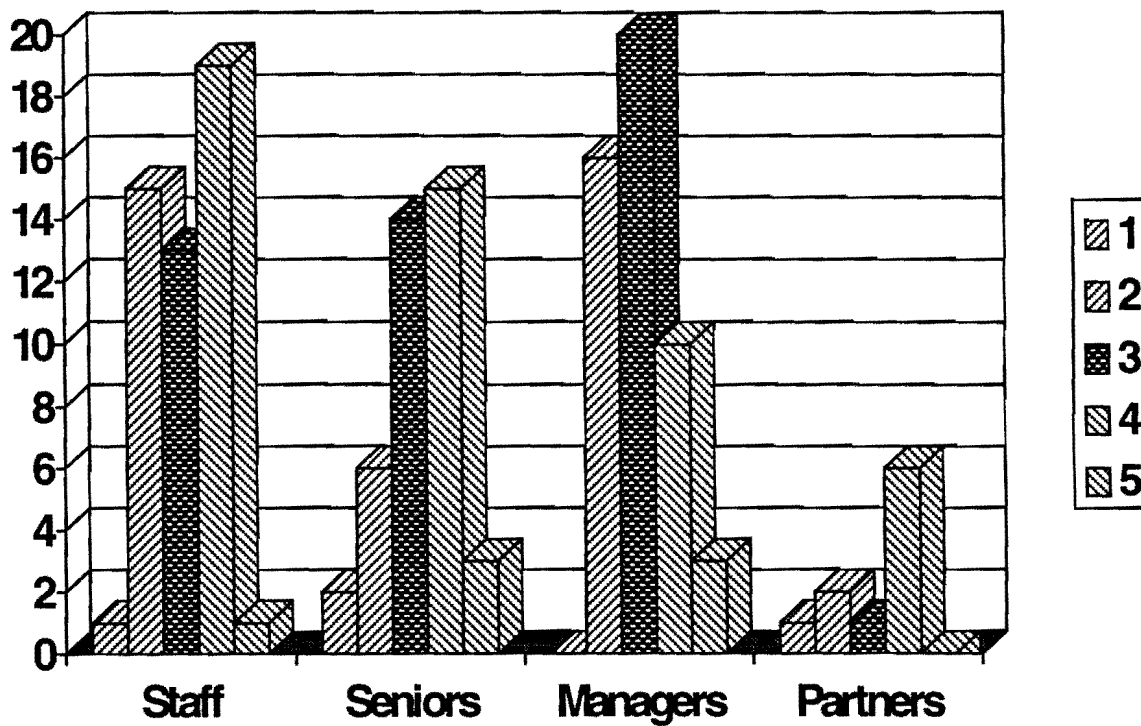


Figure 8

Are Staff Expected to Identify Opportunities to Market Services?

(mean response by firm to Q 19)

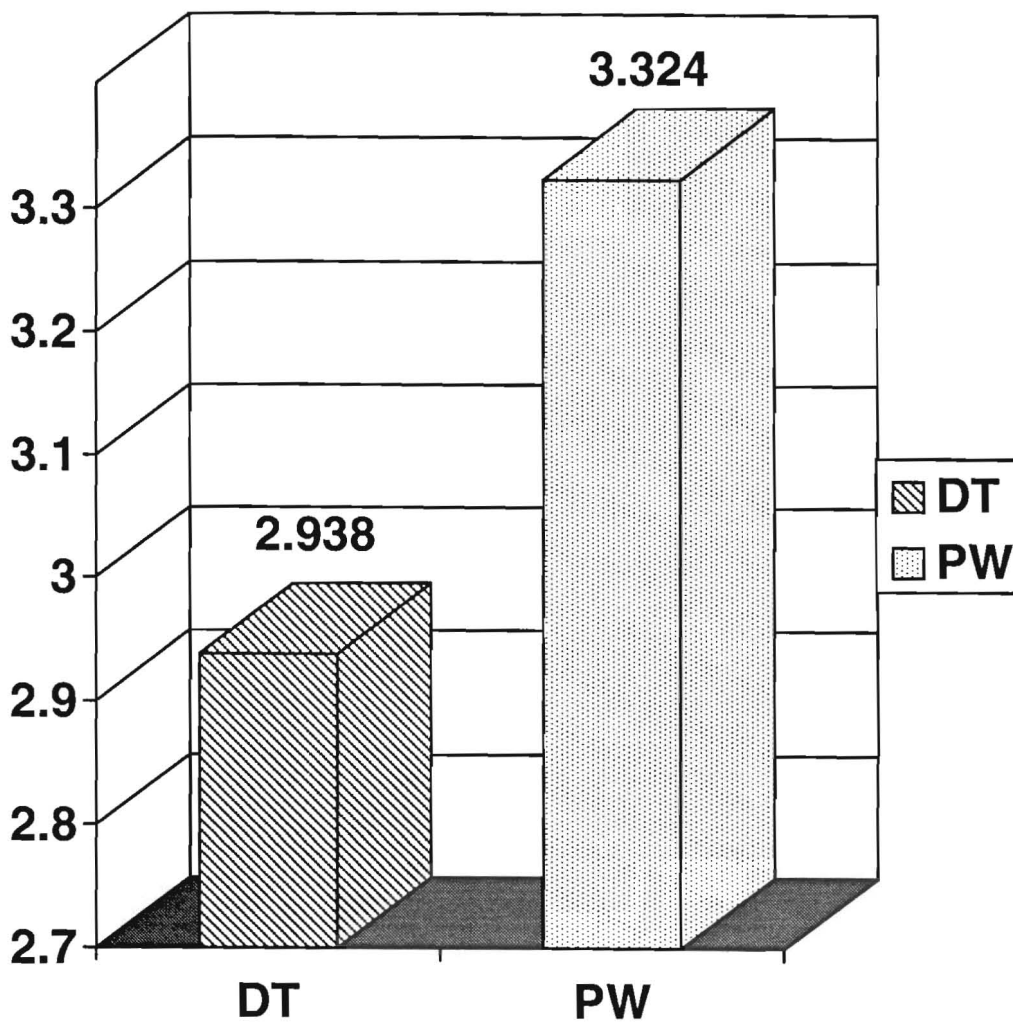


Figure 9

Does Exceeding the Time Budget Have Negative Ramifications?

(frequency of response to Q 10)

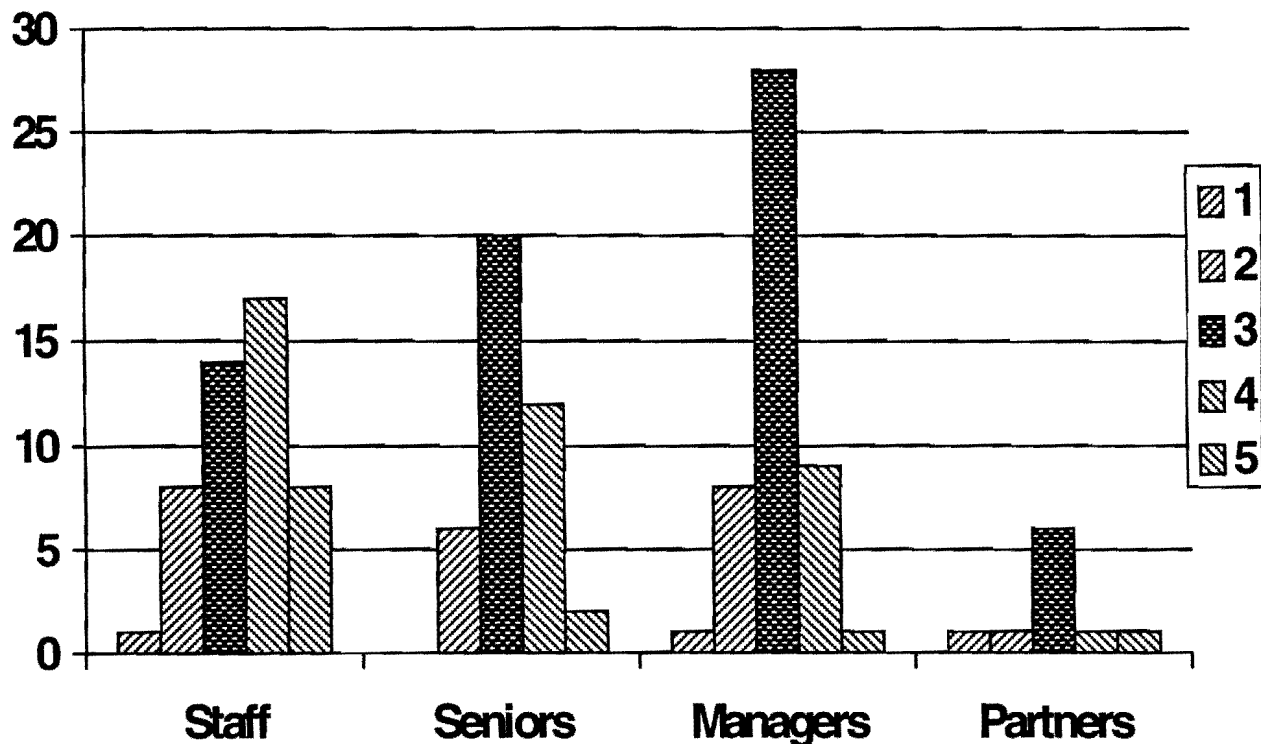


Figure 10

Does Exceeding the Time Budget Have Negative Ramifications?

(mean response by firm to Q 10)

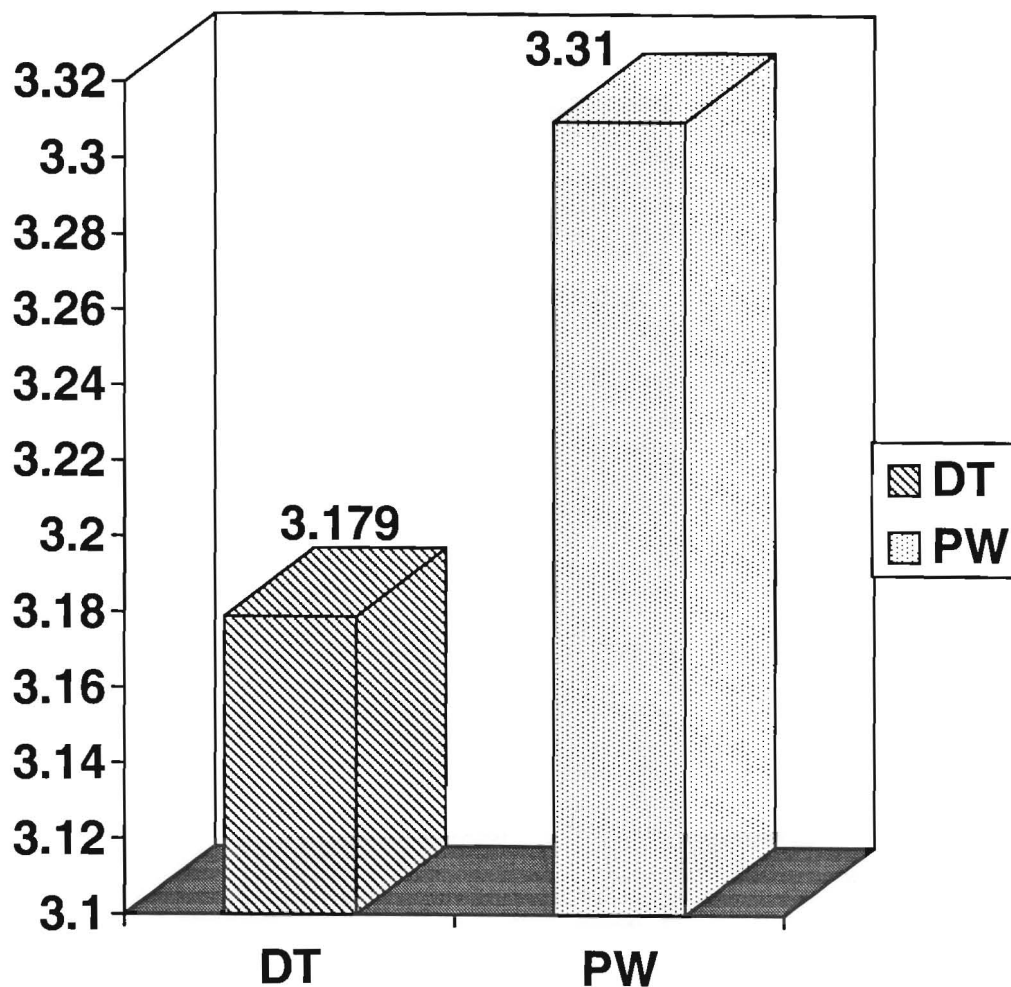
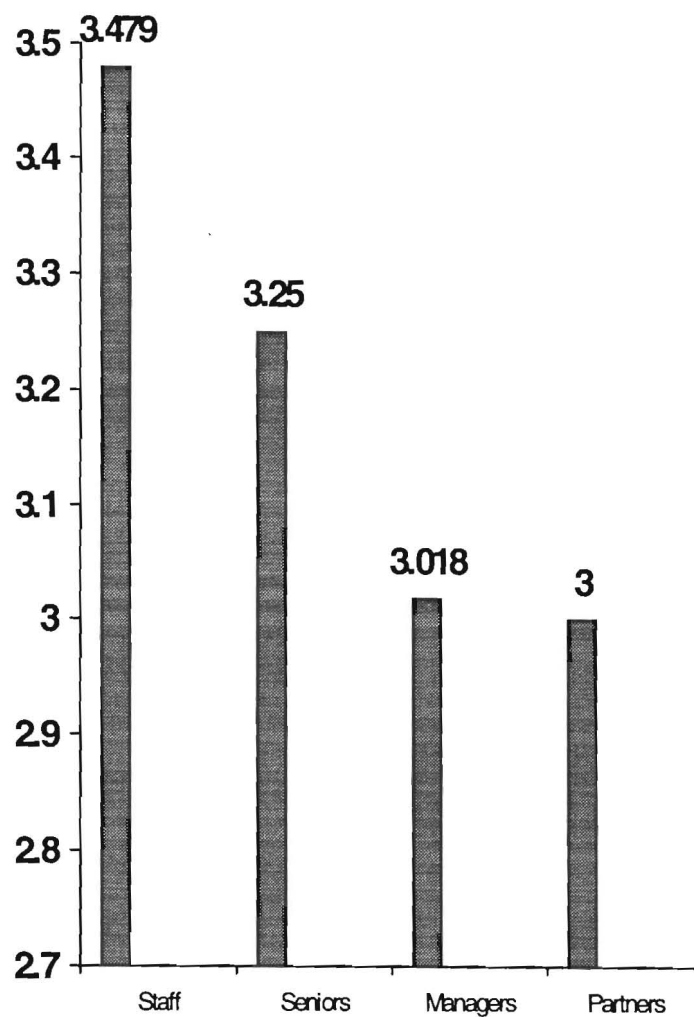


Figure 11
Mean Response to Question 10
by Employee Level



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